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ABSTRACT

This guidebook is based on research on the human brain and the way it processes information. It is noted that research on the learning process has studied the differing functions of the left and right hemispheres of the brain. This research supports the theory that students are inclined to learn through different modalities (tactual/kinesthetic, visual, or auditory) and that teaching styles and classroom environments can be modified to meet the needs of different kinds of learners. The guide provides information on indicators and predictors of learning styles and effective teaching strategies for students with particular learning styles. An overview is presented of learning style inventories and trial lessons which have been developed to determine a student's learning style. A learning style inventory is included, offering a comprehensive approach to diagnosis of an individual's learning style, and an informal checklist for student use provides clues to the characteristics which may influence learning style. Classroom activities for children from K-6 are presented, each geared to be effective with combinations of kinesthetic, tactual, visual, and aural learning styles. (JD)

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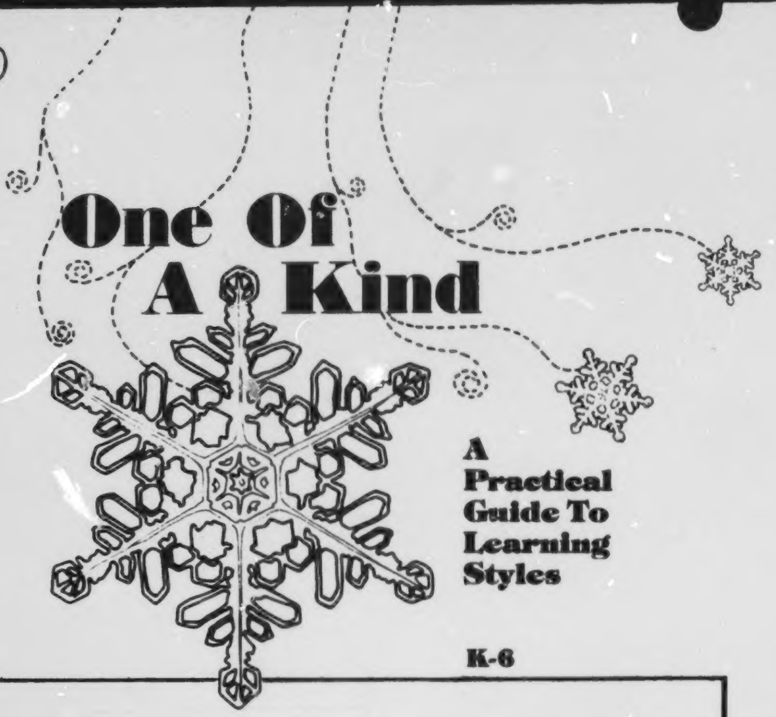

One Of A Kind

A Practical Guide To Learning Styles

K-6

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Foreword

The primary quest of the education profession has been to determine ways whereby students may learn in a more effective manner. Recently, a great deal of emphasis has been given to appraising one's learning style, then using materials and methods most compatible with that style. It is hoped that this guide will provide the teachers of this state with both a theory base and a pool of activities to help meet the learning needs of their students.

The Oklahoma State Department of Education acknowledges and expresses its appreciation to all those who contributed to this project.

Sincerely,

Leslie Fisher

Leslie Fisher
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Introduction And Background To Learning Styles

Introduction

This one-of-a-kind Learning Styles Guide includes a variety of sections designed to assist all educators to better understand the process of learning. There are many times teachers are concerned about an individual student's progress in the cognitive domain, such as grades or other achievements, yet they seldom inquire about non-cognitive factors such as learning stlye, teaching style and teacher-student interaction are very important to student achievement.

As a result of hereditary and environmental influences, people develop the ability to learn in different ways. The different ways that people learn are referred to as learning styles. Learners develop consistent and definite methods of providing and processing information to the brain.

Although it is fashionable today to discuss learning styles or teaching styles, caution should be exercised to understand the true meaning of "style." Style should not be confused with method. Method is defined as a procedure, usually well defined, specific and far reaching, as an established objective.

The term learning style explains an individual's constant way of handling stimuli in the context of learning or behaviors which serve as indicators of how a person learns and adapts to the environment. Research conducted in the area of learning styles began in the 1800s with Jung, Schiller, Piaget, Freud, Erickson and others. These researchers placed great emphasis on problem solving, creativity, emotional, motivational and social factors.

Experiential models emphasized learning as the result of concrete emotional experiences with cognitive processes, conceptual analysis and understanding. Among the major contributors in this: Piaget, Bruner, Kolb and Fry.

"Learning Styles is much more than just another innovation. It is a fundamental new tool with which to work. It is a new way of looking at learning and instruction, a deeper and more profound view of the learner than known previously. It is a basic framework upon which a theory and practice of instruction can be built. It makes obsolete any single framework for teaching all students. All recent innovations, whether staff utilization, modular scheduling, independent study, or fundamental education, must be rethought in the light of learning style."[1]

Learners may be matched with specific learning styles. An example is the student requiring a systematic, precise format and needing a step-by-step procedure for instruction. In contrast to this extreme, some students do not follow any predictable sequence or pattern. Many students adjust their learning style and work very well with any type of teaching presentation.

There are several identifiable teaching styles. Some teachers demand an exact performance from their students. Teachers at the other end of the continuum provide a structure that allows students to pursue their best style of learning. Some learners function well in any type of learning environment.

The development of this learning styles guide is based on the assumption that research findings pertaining to student learning styles and teaching styles should have important and practical implications for education.

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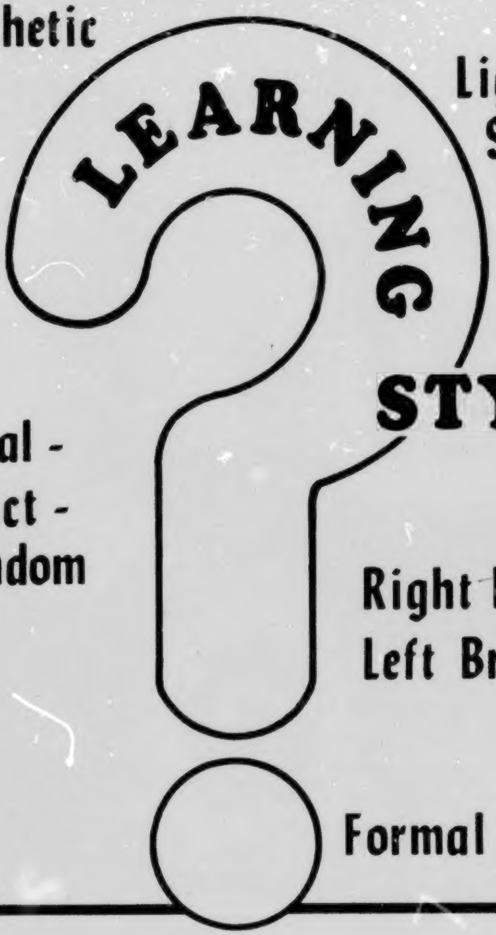
[1] "School Applications of the Learning Concept," Student Learning Styles Diagnosing and Prescribing Program, Reston, VA: NASSP, p. 131.



LEARNING STYLES

Visual
Auditory
Kinesthetic

I'm confused...
There's so many...
So much...

Light
Space
Time
Sound

Concrete -
Sequential -
Abstract -
Random

Right Brain -
Left Brain

Task-oriented
Child-centered
Subject-centered
Learning-centered

Structured -
Unstructured

Formal - Informal

Learning Styles Theory Overview[3]

Multidimensional Instruments

Child Rating Form
RAMIREZ & CASTANEDA
(Field Independence/Sensitivity and Cultural Differences)

Cognitive Style Interest Inventory
HILL
(Measures distractions, visual, tactual, auditory perceptions; motor coordination; social interaction) 50 min.

4-Mat
McCARTHY
(Uses right-left mode technique)
CONCRETE-REFLECTIVE
ABSTRACT-REFLECTIVE
ABSTRACT-ACTIVE
CONCRETE-ACTIVE

Learning Style Identification Scale
MALCOLM, LUTZ, GERKEN, HOELTKE
(Problem-solving methods, styles identified are based on classification of information reception and use, cognitive development and self concept)

Learning Styles Inventory
RENZULLI & SMITH
(Measures attitude toward 9 modes of instruction) [4-12 grade]
LECTURE DISCUSSION
INDEPENDENT STUDY PROJECTS
[are most significant] 30 min.

Learning Style Inventory [3-12 grade]
Productivity Environmental Preference Survey [Adult]
DUNN AND DUNN AND PRICE
(Investigate Stimuli and Elements)
ENVIRONMENTAL EMOTIONAL
SOCIOLOGICAL PHYSICAL
PSYCHOLOGICAL

Learning Style Inventory: Primary Version
PERRIN
(Based on Dunn, Dunn, and Price for younger children) 20 min.

Learning Styles Inventory
CANFIELD & CANFIELD
(Looks at Conditions, Content, Modes, Expectations)
PEER-AFFILIATION
ORGANIZATION-STRUCTURE
GOAL SETTING-ACHIEVEMENT
COMPETITION-EMINENCE
INSTRUCTOR-AFFILIATION
DETAIL-STRUCTURE
INDEPENDENCE-ACHIEVEMENT
AUTHORITY-EMINENCE

Myers-Briggs Type Indicator
MYERS-BRIGGS
(Personality Dispositions)
EXTRAVERSION-INTROVERSION
SENSING-INTUITION
THINKING-FEELING
JUDGMENT-PERCEPTION

Reading Style Inventory [1-12]
CARBO
(Based on Dunn, Dunn and Price, specifically investigates reading style)

Short Inventory of Approaches & Studying
ENTWISTLE
(Concerns achieving orientation, reproducing orientation, meaning dimension, comprehension style, operation style, versatile approach)

Student Learning Styles Questionnaire
GRASHA AND REICHMANN
(Elicits attitudes toward college courses)
INDEPENDENT AVOIDANT
COLLABORATIVE DEPENDENT
COMPETITIVE PARTICIPANT

TLC- Learning Preference Inventory
SILVER
(Assesses learning preferences [analytic, personal, innovative, pragmatic])
INTUITIVE SENSING
THINKING FEELING

---

[3] Adapted from: Dunn, DeBello, Brennan, Krimsky, Murrain, "Learning Style Researchers Define Differences Differently," Educational Leadership (February 1981): 374 [Reprinted with permission of the ASCD. All rights reserved.]; Claudia E. Cornett, "What You Should Know About Teaching and Learning Styles," Phi Delta Kappa Educational Foundation, 1983, pp. 32-37 [Used with permission].

Learning Styles Theory Overview[2]

Cognitive Style Instruments

Cognitive Profiles

LETTERI

(Researches thinking patterns, strategies and procedures employed by an individual)

FIELD INDEPENDENCE/DEPENDENCE
SCANNING/FOCUSING
TOLERANT/INTOLERANT
LEVELING/SHARPENING
BREADTH OF CATEGORIZATION
COGNITIVE COMPLEXITY/SIMPLICITY
REFLECTIVENESS/IMPULSIVENESS

Concrete-Operational Reasoning Test and Logical Reasoning Test

SUND

(Reveals formal or concrete operational reasoning)

Gregorc Style Delineator

GREGORC

(Considers distinctive behaviors and dualities)

CONCRETE-SEQUENTIAL
CONCRETE-RANDOM
ABSTRACT-SEQUENTIAL
ABSTRACT-RANDOM

Group Embedded Figures Test

WITKIN, et al

(Field independence and dependence characterize analytical vs. global styles of information processing)

15 min.

Inventory of Learning Processes

SCHMECK

(Grouped by factor analysis into synthesis/analysis, study methods, fact retention, and elaborative processing, reflecting a continuum of student information processing from deep and elaborative to shallow and repetitive)

20 min.

Learning Strategies Questionnaire

KAGAN & KRATHWOHL

(Describes focusing, scanning on continuum of discrete to global orientation)

Learning Style Inventory

KOLB

(Examines hereditary equipment, past experience, environment)

DIVERGERS
ASSIMILATORS
CONVERGERS
ACCOMMODATORS

Matching Familiar Figures Test

KAGAN

(Measures impulsive and reflective styles)

Schematizing Test

GARDNER

(Generalization vs. Discrimination)

Your Style of Learning & Thinking

TORRANCE, et al

(Right-Left Hemisphere and Integrated Information Processing)

20 min.

---

[2] Ibid.

Learning Styles Theory Overview[4]

Affective Style Instruments

Intellectual Achievement Responsibility Questionnaire
CRANDALL AND CRANDALL
(Assesses internal-external perceptions of control in intellectual and academic situations)

Student Motivation Information Form
WLODKOWSKI
(Motivation of intrinsic or extrinsic)

Paragraph Completion Method
HUNT
(Assesses degree of classroom structure needed [Special Training]

People in Society (Internal/External Scale
ROTTER
(Measures degree of control persons feel over their world)

Perceptual Modality Instruments

Swassing-Barbe Modality Index
BARBE & SWASSING
(Involves visual, auditory and kinesthetic-tactual processing)

Swassing-Barbe Checklist of Observable Modality Strength Characteristics
SWASSING & BARBE
(Checklist of Modalities)

Find Your Modality Strengths
BARBE
(Tests modality strengths)

Learning Methods Test
MILLS
(Tasks involve visual, kinesthetic, phonic and combination presentations of words)

Edmonds Learning Style Identification Exercise
REINERT
(Profile of Perceptual Styles in four categories: written word [reading], visualization, listening and activity [kinesthetic]

SRI Student Perceiver Interview Guide
SELECTION RESEARCH, INC.
(Elicits student perceptions grouped under 16 themes - affective in nature)
45 min.

---

[4] Ibid.

Methodology

IS TEACHING BY ADAPTING TO LEARNING STYLES A PROVEN METHOD FOR TEACHING?

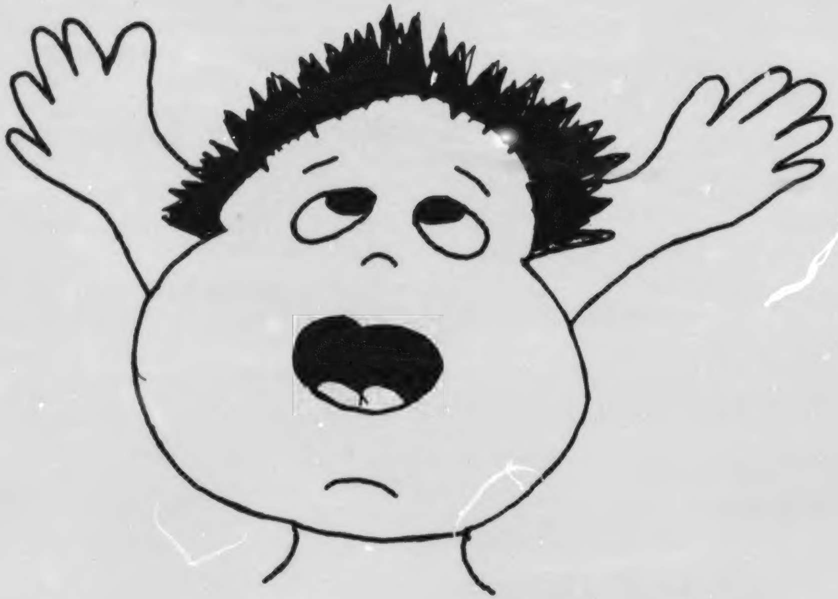
This is an area which has been researched since 1923. Teachers seek to develop the unique talent of each student through the method by which the student learns best. This has led to many research studies in the area covering processes by which students learn.

Research has shown that approximately 30 percent of elementary school children have visual modality strength, 25 percent have an auditory strength and 15 percent are kinesthetically oriented. The remaining 30 percent have mixed modality strength.

IF I HAVE A STUDENT IN MY CLASS WHOSE LEARNING STYLE IS NOT COMPATIBLE WITH MY TEACHING STYLE, DO I ASK TO HAVE THAT STUDENT TRANSFERRED?

You should not ask for a transfer for that student. Teachers do a good job of adapting teaching styles when they see that students are not learning. For example, in teaching a math process, teachers will usually explain the process orally, then put it on the board. This is sufficient for the auditory and visual learner. The child who is still experiencing difficulty may be the tactual-kinesthetic child who can be sent to the board to do the work.

For those who do not feel comfortable with matching styles, adapting the curriculum material might be the answer. The writing of a new curriculum would not be necessary. The teacher would simply find the activities and resources which would present the material in the style of the learner. (See Activities Section.)



HOW WILL I EVER REACH ALL THE CHILDREN?

I have my teaching style and the children have their learning styles. There is only one of me and so many of them.

But my students are all different. If I allow them to make a decision, some ask:

"When is this due?
How long should the paragraph be?
Where do you want my name?"

IS THIS LEARNING STYLE?

I KNOW! I can provide instruction appropriate to all learning styles. Then I can reach the children.

Yes, because learning style tells HOW the students are learning, not how well or how much. The need for structure is part of their learning style.

Some students need a highly structured environment (consistent, fair but firm). Others need a moderately structured environment (closer to autonomy).

One could call structure teacher directed. Structured students need much teacher direction; unstructured students are more self-directed.

THIS HAS NOTHING TO DO WITH ABILITY!!!

I GET IT -

BE FLEXIBLE!

I understand now. All I have to do is be flexible. I have my room arranged for the environmental comforts, the classroom has been arranged for the structured and unstructured, but then . . .

What about those students who have to act out everything I say?

What about the ones who never seem to understand, even though I repeat and repeat. What do they want me to do, draw them a picture?

YES! TO ALL OF THE ABOVE.

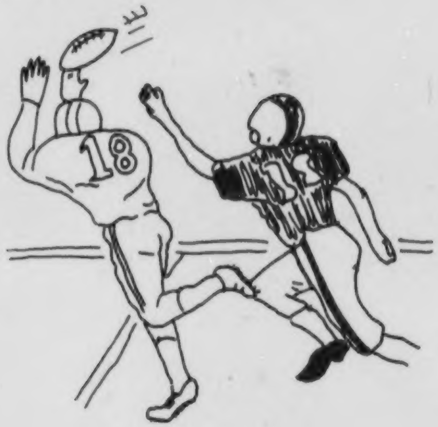
Tell the students how to do it, show them how to do it and draw them a picture. Thus, you will provide for the modalities of learning: tactual-kinesthetic, visual and auditory.

Perception is the key to our learning. Each modality represents a way of perceiving and picking up information or learning. A tactual learner learns by touching and feeling. A kinesthetic learner learns through movement of the body and muscular involvement. A visual learner relies on seeing things and internal visualization. An auditory learner depends on hearing and verbalization for learning.

Most important, always give positive feedback and support.

IMPORTANT!!

The following pages list behaviors connected with different learning styles or modalities. Remember, these are generalizations and clues; they may vary from child to child.



Behavior Indicators Of Modality Preferences[5]

*TACTUAL/KINESTHETIC These children are hands-on learners. Their motto is "We learn to do by doing."

READING - likes action from the first page on, finds it difficult to sit still while reading, doesn't particularly like reading.

SPELLING - spells by "feel," therefore often is a poor speller.

HANDWRITING - pushes hard on writing utensil, usually has short pencils, has difficulty writing in small spaces.

THE ARTS - moves to music, likes to touch paintings and statues, not too involved unless the involvement can be physical.

MEMORY - remembers what he does, not what is seen or heard.

IMAGINATION - visualizes only with movement.

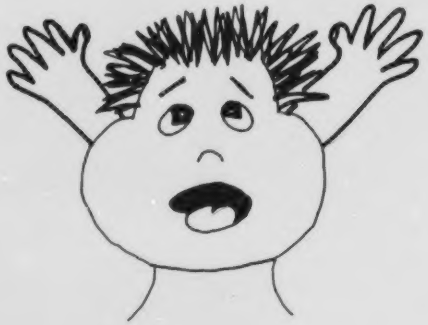
PROBLEM SOLVING - is impulsive, works out the problem physically.

COMMUNICATION - uses many hand gestures, doesn't like to listen, hard to hold this child's attention, will get close to the teacher in conversation.

PREDICATES - uses words like "feel," "get," "take," "I can't get a handle on it," "how does that grab you," "don't take it to heart."

RESPONSIVE BEHAVIOR - is fidgety, in constant movement, can't stay in seat, touches everything, acts out stories, has to try everything, hugs, pulls, jumps, stamps, crawls, etc.; body tension will reveal mood.

PERSONAL APPEARANCE - starts out neat, but ends up with a rumpled appearance.



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[5] Teaching Through Modality Strengths: Concepts and Practices. Copyright, 1979, Zaner-Bloser, Inc., Columbus, Ohio. (Reprinted by permission.)

*The authors have added tactual to the text.

Behavior Indicators Of Modality Preferences[6]

VISUAL - these children learn by watching and seeing, whether by pictures, diagrams, verb descriptions or imagined scenes.

READING - likes descriptions because the child imagines the scene; staring into space can indicate extreme involvement.

SPELLING - word recognition is by sight and shape.

HANDWRITING - usually good in size and spacing, has to look good to the child.

THE ARTS - prefers visual arts, likes visual displays, has the ability to see details.

MEMORY - remembers faces rather than names; if given verbal information must write it down or take notes in order to remember it.

IMAGINATION - very good imagination, visualizes in great detail while thinking.

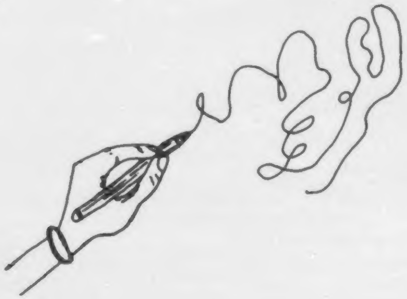
PROBLEM SOLVING - the child is a planner and a list maker, is organized.

COMMUNICATION - is quiet but responsive, describes things simply and cannot listen for a long period.

PREDICATES - the child uses language such as "see," "look," "get the picture," and "as I see it."

RESPONSIVE BEHAVIOR - the child is aware of the environment, observes everything, doodles and the facial expression tells how the child feels (whether happy or angry).

PERSONAL APPEARANCE - the child is neat and clean, usually does not vary in dress style.



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[6] Teaching Through Modality Strengths: Concepts and Practices. Copyright 1979, Zaner-Bloser, Inc., Columbus, Ohio. (Reprinted by permission.)

Behavior Indicators Of Modality Preferences[1]

AUDITORY - This child can hear directions and learn from them.

READING - prefers few pictures or descriptions, when reading a story likes conversation or dialogue; therefore likes plays; moves lips when reading or verbalizes words in the mind.

SPELLING - sounds out words, therefore uses the phonic approach.

HANDWRITING - has difficulty learning to write, verbalizes the strokes while writing.

THE ARTS - prefers music to visual arts, sees the art work as a whole rather than in detail, would rather talk about it than look at it.

MEMORY - remembers names, forgets faces; memorizes by verbal repetition; remembers more of what is heard than what is seen.

IMAGINATION - thinks in sounds, details are not important.

PROBLEM SOLVING - talks problems out with self or others, finds solutions by hearing what others say.

COMMUNICATION - loves to talk and talks constantly, is repetitive, interrupts others frequently, likes the sound of own voice.

PREDICATES - uses words like "hear," "listen," "it rings a bell," "hear what I'm saying."

RESPONSIVE BEHAVIOR - talks to oneself, and sometimes answers; evaluates what is going on or what to do next; is very verbal, shows emotion through tone quality, pitch of voice as well as other sounds.

PERSONAL APPEARANCE - the clothes are not important, but the child can tell you why those clothes are being worn.

---

[1] Teaching Through Modality Strengths: Concepts and Practices. Copyright, 1979, Zaner-Bloser, Inc., Columbus, Ohio. (Reprinted by permission.)

Brain Dominance: Implications For Learning[8]

BRAIN RESEARCH: IMPLICATIONS FOR INSTRUCTION

During the past few years, a number of research studies have been conducted to investigate how the two hemispheres of the brain affect the learning process. Those studies indicated that the left and right hemispheres each have specialized abilities which facilitate learning of particular subject matter (see below). However, while the task, or activity, determines which hemisphere has dominance, or control, both sides of the brain are engaged in learning all subject matters.

Although those findings dispute the idea that only one side of the brain is involved in learning at one time, previously assumed by many educators, there is considerable evidence that there are individual differences among people, to the extent that one hemisphere is more differentially aroused than the other. Those findings have important implications for education and suggest that [1] Students' individual learning (hemispheric processing) styles should be identified, and [2] Subject matter should be introduced through methods that accommodate those styles.

Levy emphasized that brain research thusfar, "is only the initial step"--The research to guide us in understanding the synthesis of the specialized abilities of each hemisphere is yet undone. "Yet knowing the goal, perhaps it will be possible for teachers with sensitivity to find a way long before scientists can supply specific recommendations."

The research also suggests that simple, repetitive, and dull tasks result in low levels of bilateral activation, with reliance on a single hemisphere, and only weak facilitation from the other side; in contrast, complex, differentiated, and interesting tasks result in increased activation of both sides of the brain.

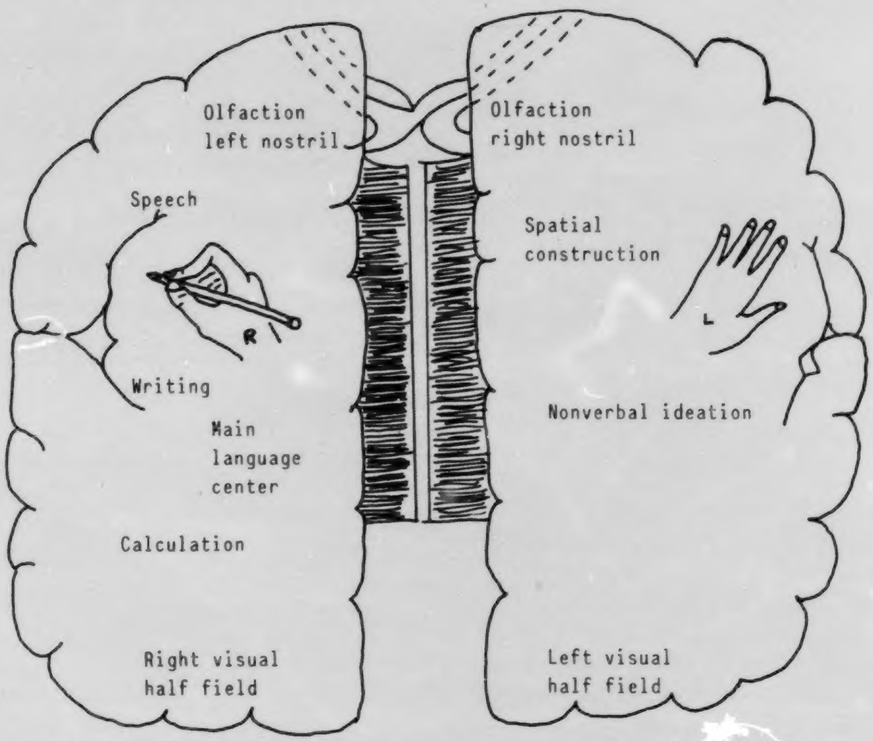
Furthermore, evidence concerning the role played by the right hemisphere in emotion, and, in general, activation and arousal functions, suggests that if a student can be emotionally engaged, aroused and alerted, the specialized abilities of both sides of the brain will participate in the educational process, regardless of subject matter. Similar findings have emerged from psychological studies.

---

[8] Jerry Levy, "Research Synthesis on Right and Left Hemisphere: We Think With Both Sides of the Brain," Educational Leadership (January 1983), p. 71. (Above written and submitted by Dr. Jeanne R. Pizzo.)

Corpus Callosum

Specialized abilities of the left cerebral hemisphere.


Olfaction
left nostril
Olfaction
right nostril
Speech
Spatial
construction
R
L
Writing
Main
language
center
Nonverbal ideation
Calculation
Right visual
half field
Left visual
half field

Specialized abilities of the right cerebral hemisphere.

The corpus callosum "normally plays a highly important role in facilitating arousal of both hemispheres, in making it possible for both hemispheres to process information and to derive perceptions at the same time."

Illustration from The Brain by Richard M. Restak. Copyright 1979 by Richard M. Restak. Reprinted by permission of Doubleday and Company, Inc.

Right Brain	Left Brain
INTUITION	INTELLECT
DIVERGENT	CONVERGENT
SENSUOUS	DEDUCTIVE
IMAGINATIVE	RATIONAL
METAPHORIC	VERTICAL
HORIZONTAL	DISCRETE
CONTINUOUS	REALISTIC
CONCRETE	DIRECTED
IMPULSIVE	DIFFERENTIAL
FREE	SEQUENTIAL
EXISTENTIAL	HISTORICAL
MULTIPLE	ANALYTICAL
TIMELESS	EXPLICIT
HOLISTIC	OBJECTIVE
TACIT	SUCCESSIVE
SUBJECTIVE	CRITICAL
SIMULTANEOUS	"NO"
HAS NO REPRESENTATION OF "NO"	
HOLISTIC	ANALYTICAL

(SUMMERS)

Right Brain

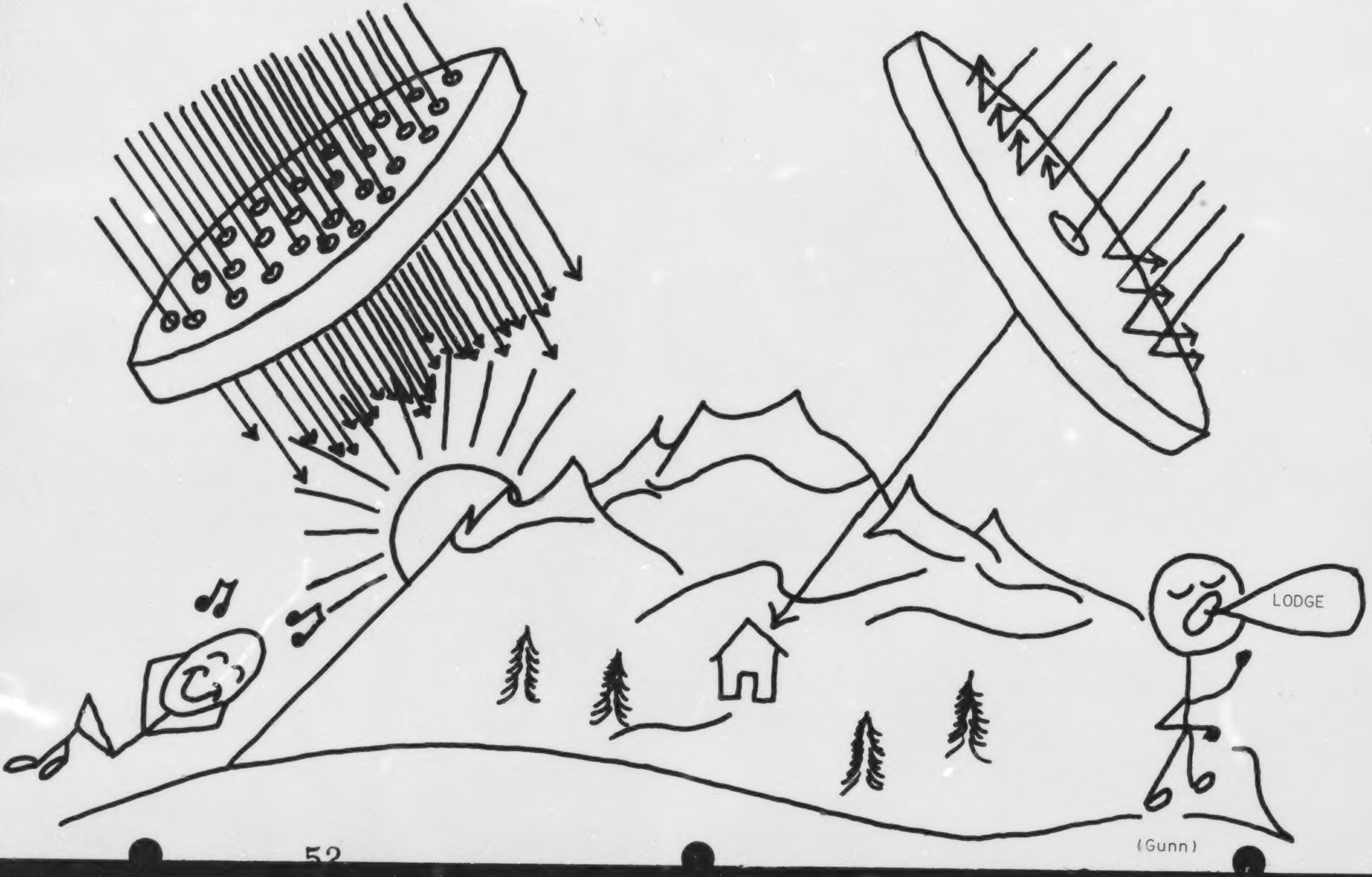
EMOTIONS
LAUGHTER
3 - DIMENSIONAL
MUSIC/RHYTHM/PITCH
WISHING/HOPING
ABSTRACTIONS
ART
UNDERSTANDING MOOD
ESSENCE
INTUITION
PERCEPTIVENESS
MOVEMENT
PLAYFULNESS
CREATIVITY
SINGING
UNDERSTANDS METAPHOR

WHOLE CONCEPTS

Left Brain

SPEECH
SCIENTIFIC THINKING
ORGANIZE
SYNTHESIZE
RATIONALIZE
CRITICIZE
ORDERS
DETAILS
REMEMBERS

ANALYTICAL



RIGHT HEMISPHERE
(Understands total Experience)

LEFT HEMISPHERE
(Limited surface Structure)

(Gunn)

Right Brain Accessing

THE EXPERIENCE:

FATTY ACIDS ARE HIGH

BLOOD SUGAR IS UP

ADRENALINE FLOWS

ACTH:

- EPINEPHRINE (UPPER)
- DOPAMINE (UPPER)
- ENDORPHINS (ANESTHETIC)
- ENKEPHALINS (ANESTHETIC)

BREATHING STIMULATED

THROAT RELAXES...TAKING IN MORE AIR

MORE OXYGEN TO BRAIN AND MUSCLES

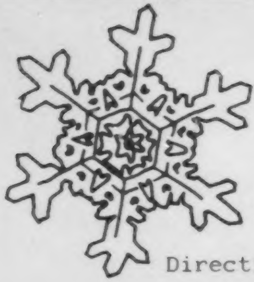
LIVER MANUFACTURES MORE GLUCOSE, ADDING FUEL TO TISSUES

PUPILS DILATE...SHARPENING VISUAL PERCEPTIONS

THE PEAK HUMAN EXPERIENCES OCCUR DURING . . . PLAY!

(SUMMERS)

Indicators And Predictors



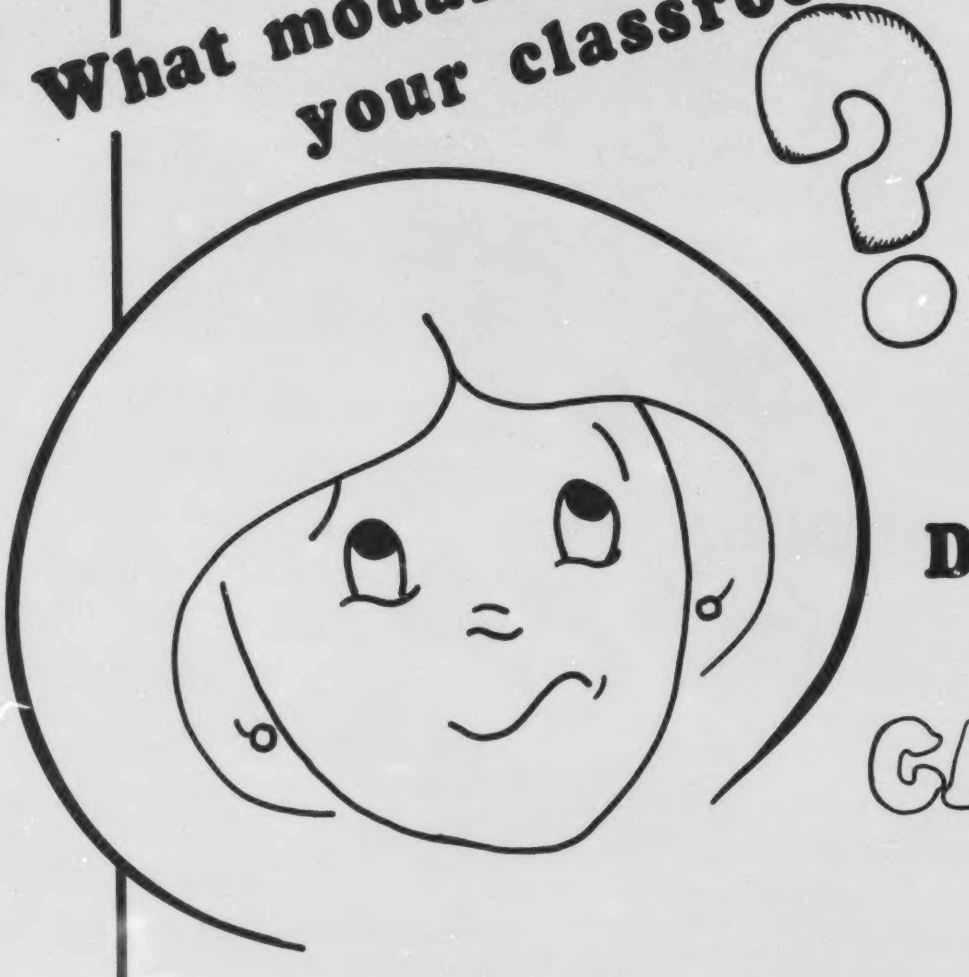
Learning Style Indicator[1]

Directions: Read each pair of statements and mark the box next to the statement that most closely describes you.

1. I understand things better from a picture.	☐	☐	I understand things better from someone telling me or reading about them.
2. I look at charts and diagrams before I read the written part.	☐	☐	I read the written part before I look at the charts and diagrams.
3. I memorize things by writing them out.	☐	☐	I memorize things by repeating them aloud.
4. I like examples first, rules later.	☐	☐	I like rules first, examples later.
5. I usually get more done when I work alone.	☐	☐	I usually get more done when I work with others.
6. I enjoy doing a number of things at the same time.	☐	☐	I prefer doing things one at a time.
7. I usually ask "why" questions.	☐	☐	I usually ask about facts.
8. I prefer working quickly.	☐	☐	I prefer to work slowly.
9. I answer questions quickly.	☐	☐	I answer questions carefully and slowly.
10. I take chances at making mistakes.	☐	☐	I try to avoid making mistakes.

[1] Diane Lapp and James Flood, Teaching Reading to Every Child (Macmillan Publishing Company, Inc., 1978), p. 146.

What modality is your classroom?



Don't ignore it!

CAPITALIZE ON IT!

Classroom Organization By Modality

The Tactual-Kinesthetic Classroom[2]

The physical organization in this classroom is not evident at all. The teacher's desk is out of the way in a far left corner. Items on the desk are in disarray; the desk is used mainly as readily accessible storage space for clocks, jar lids, beads, scissors and other assorted items. The students' desks are lined up along the left wall with wide aisles between rows. The center of the room is open space.

Beyond the open space is the chalkboard. The chalkboard gives evidence of much use. The open shelf-space contains many items such as blocks, counters, models, diagrams and construction materials. The shelves are organized by activities: art supplies, books, models, student-made materials. Around the room are many examples of student-made art pieces, including macramé, string art and car and airplane models. The bulletin board is near the teacher's desk and contains geometric drawings by the children.

Much instruction takes place in the open space in the center of the room. Acting out a scene or activities occurs frequently. The teacher provides guidance for fine motor tasks. Instructional examples are accompanied by models and gestures. The children are encouraged to write spelling words, either at their desks or on the chalkboard. Unknown words are traced. Each child has crayons that are used frequently.

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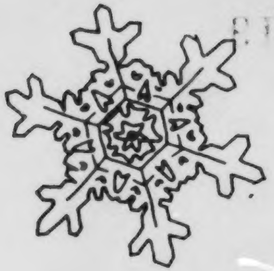
[2] Walter B. Barbe and Michael N. Milone, Jr., "Modality," Instructor (January 1980). [Used with permission.]



The Visual Classroom[3]

The physical organization in this classroom is immediately clear. The student desks are organized neatly in groups facing the teacher's desk. There are several bulletin boards about the room, each colorfully decorated and displaying material relating to some element of the current lessons. There are three learning centers identified by attention-getting artwork. The math center contains numerous graphs and pictures of math examples.

Numerous posters, signs and pictures are displayed about the room. The letters of the alphabet are in orderly display along the wall opposite the windows.

Much instruction takes place from the teacher's desk. Workbooks, worksheets and pictorial presentations dominate instruction. Reading is frequently done silently, stressing a sight word approach. Configuration and pictures are used as clues for unlocking new words. Math drill is either from worksheets or flash cards. Spelling is practiced through the use of flash cards. Instruction to the children are often in the form of task cards or printed materials. Art activities are common, usually two dimensional with line, color and shape stressed. And slide films and movies are often viewed to provide instruction or as special activity.

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[3] Ibid.

The Auditory Classroom[4]

The physical organization of this classroom is not immediately noticeable. Teacher and student desks are grouped together toward the front and center of the room. The chalkboard is at the opposite end of the room from the teacher's desk. There is one bulletin board in the room with a seasonal display on it. Two learning centers and a listening station are along the right side of the classroom.

The listening station has a tape recorder and a record player. There are numerous tapes and records that provide instruction in basic skills, plus some records of sounds and music. Each of the learning centers has a cassette recorder in plain sight. The directions for each center are on cassette tapes.

The instruction in this classroom is mainly in the form of verbal discussion and lecture. Student talk is encouraged, and language lessons are accompanied by much discussion. Reading instruction is built on phonics lessons. There are frequent "spelling bees." The children are encouraged to do verbal math problems and games, and to respond orally to flash cards. There is a constant "buzz" of activity as the students chat back and forth about their lessons and about other activities.

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[4] Ibid.

Environmental Factors

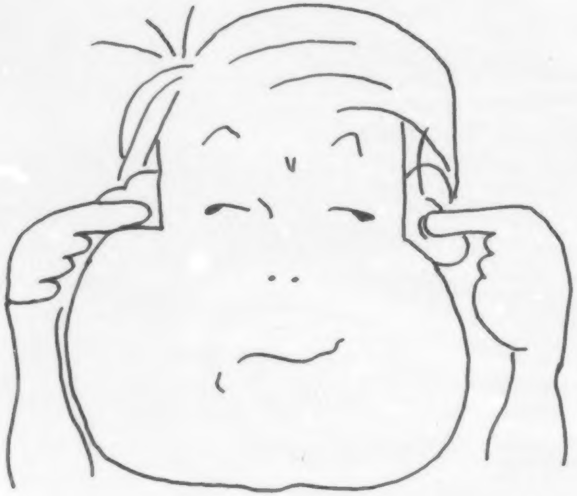
"I wish they would all just stay in their chairs!

Will my unstructured students accept straight rows in my classroom?

How can I do role-playing with desks in the way?

How noisy is 'too noisy'?

Why can't they learn on a gloomy day?"



Because we are all individuals (yes, kids are too), we all have our own comfort zone when it comes to learning. Some need complete silence, some need music as a buffer, some get so lost in their work that nothing distracts them. Perhaps you have trouble concentrating when you are cold. Some of your students get sleepy when it is warm. Others can't seem to sit still for five minutes. How can we accommodate all these environmental factors in a classroom?

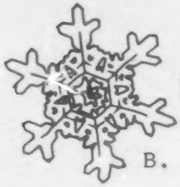
Physical Elements

The following are physical elements that affect learning styles. When individuals are involved in a learning situation, unconsciously they are responding to stimuli which may or may not enhance learning. These stimuli can be physical in nature and include the following:

A. Noise
B. Temperature
C. Lighting
D. Room Arrangement

A. Noise

Many individuals require different noise levels in order to function and facilitate learning. The spectrum includes complete silence to extreme noisiness. Some individuals require noise (a radio or TV) to enhance concentration. Both types are effective if used in conjunction with an individual's stlye. Noise that enables a visual learner to concentrate, distracts an auditory learner so much that learning is reduced. Also the absolute quiet can distract a visual learner in that the individual hears noises that are not usually heard. Therefore, the quality and quantity of learning can be determined by the matching of preferred noise levels.



B. Temperature

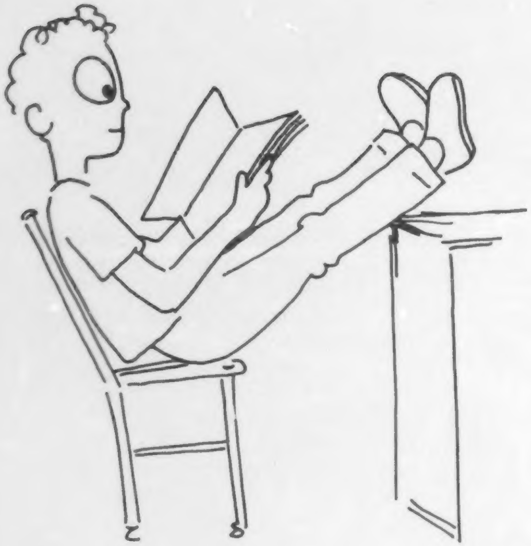
Individuals can readily identify the temperature at which they are most comfortable. When looking into a classroom, temperature preferences are quite obvious. Some children will have short sleeves while a child in the back of the room may have a coat on and indicate he/she is cold. Body temperature can greatly affect school productivity. If a child has cold hands, it will be extremely difficult to write. Also a child who is sitting far from the air cooling and is perspiring from the heat will have little chance to absorb the day's lesson. Each individual adapts him/herself and makes changes (putting on a coat if he/she is cold) when necessary to enable him/herself to feel ready to learn. Allowing options of seating arrangements to permit cold-natured children to sit close to the heat and warm-natured children to sit on the outer perimeters will increase comfort, alertness and learning productivity.

C. Lighting

Individuals respond differently to light. A light which is too bright can cause glare and almost guarantee no learning for some, as they must squint and tilt their head to shade their work. These students are in direct conflict with the stimuli. Other individuals require lights that are dim because they are relaxing and conducive to learning.

Within the classroom, children's behaviors are indicators of preferred lighting. If the light is too bright, children tend to lean over and cover their work. They also squint or appear overactive. If the light is too dim, children may work close to the paper and appear sleepy and uninterested. Location of a child's desk to proper lighting can mean a simple move, such as the addition of lights (lamps), or, if the light is too bright, placement of colored paper on the light directly above the child's desk. Such simple manipulations can increase the opportunity to learn.

D. Room Arrangement

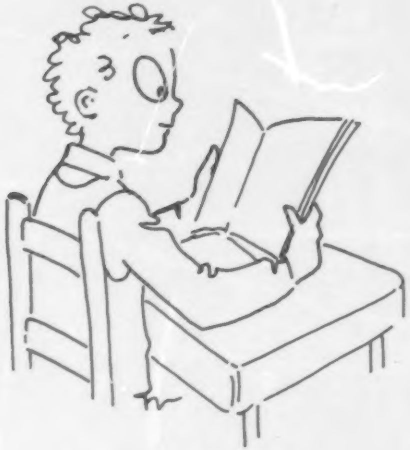


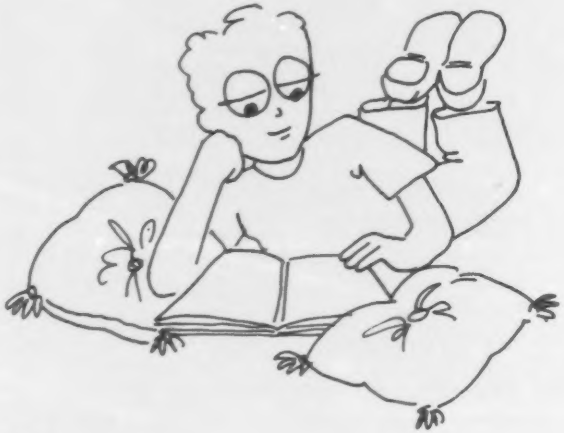
Room arrangement can usually be considered as:

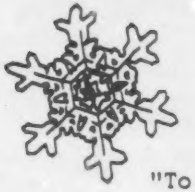
1. Formal
2. Informal
3. A combination of formal/informal

All individuals study in different learning arrangements. Some individuals prefer to study as in a library at a desk with a straight back chair, whereas others require an informal setting consisting of a lounge chair or bed with big fluffy pillows - a relaxing situation.

Children also study differently and the average classroom requires adaptations to facilitate the room arrangement students need. The students who need a formal setting are at an advantage in the average classroom, where students requiring an informal setting view the room arrangement as rigid and uncomfortable, thereby minimizing learning. By allowing a corner of a room to be informal, those students, too, can benefit from study time.







Classroom Design

"To begin redesigning your classroom to provide for varied learning styles, you first must identify each of your student's learning styles. Then, using the checklist below, begin to identify the parts of the room that might lend themselves to each of the following:

- * Place where several students may meet to discuss what they are learning
- * Well-lit reading areas
- * Garment areas
- * Desks or tables and chairs
- * Sections that permit responsible students to work without direct supervision
- * Sections that permit students to work alone, with a friend or two, in a small group, with an adult or in any combination thereof, provided they show academic progress
- * Essentially quiet and screened study areas for individuals or pairs
- * Darker sections for media viewing, photography or dramatizations
- * Cooler areas
- * Carpeted and lounge sections
- * Sections that permit close supervision of less responsible students
- * An area where snacking may be available (preferably raw vegetables and fruits, nuts and other nutritious foods)[5]

"The major objective of changing of furniture in the classroom is to provide different types of areas to permit students to function through patterns that appear to be natural for them and for their learning styles."[6]

Once the room is redesigned, rules should be established for the use of varied instructional areas. Separating the learning environment into multi-instructional areas encourages students to consider where they will find it most appropriate to do their work.[7]

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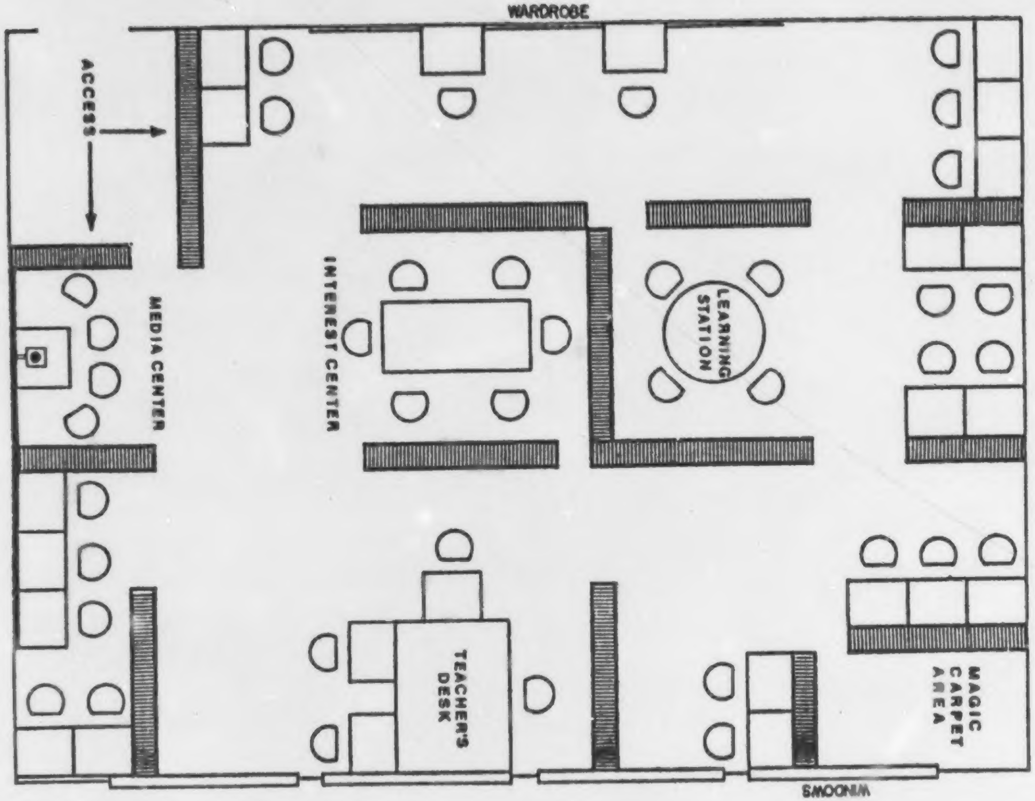
[5] Rita Dunn and Kenneth Dunn, Teaching Students Through Their Individual Learning Style, (Reston, VA: Reston Publishing Company), p. 26. [Used with permission.]

[6] Ibid., p. 29.

[7] Ibid., p. 47.


WARDROBE
ACCESS
MEDIA CENTER
INTEREST CENTER
LEARNING STATION
TEACHER'S DESK
MAGIC CARPET AREA
WINDOWS

This depicts a completely redesigned model classroom that provides for different learning styles.[8]

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[8] Ibid., p. 43.

Teaching Strategies Using Learning Styles

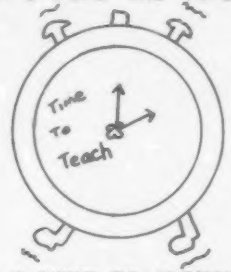
Teaching Strategies

WHAT SHOULD I TEACH THE CHILDREN ABOUT THEIR OWN LEARNING STYLES?

So that all students will realize that their learning styles are different, they should know what learning styles are. In this way they can use their learning patterns for benefit outside of the classroom. In addition, when a student recognizes the way he/she learns naturally, the outcomes are increased academic achievement, improved self-esteem and learner independence.

DO I HAVE TO HAVE A DIFFERENT PLAN FOR EACH LEARNING STYLE?

HOW CAN I FIND THE TIME TO TEACH TO EACH LEARNING STYLE?



Time is not what you need. You need creativity. You have your own plan, use it in a creative way. For example, if you are teaching a lesson on giving directions, let the auditory student give directions to another auditory learner. Have the visual learner draw a map to be shared with another visual learner. Tell the tactual-kinesthetic learner to lead another tactual-kinesthetic learner through the directions.

WHY DO I HAVE TO CHANGE? THE KIDS HAVE TO COPE OUT IN THE WORLD ANYWAY, WHY NOT START NOW?

You don't have to change. All you have to do is expand your understanding of how students learn and adapt your teaching strategy to how they learn. It will reduce your frustration and teaching will be fun because the students will be motivated to learn. They will not have to compensate by trying to learn as the teacher wants them to learn.

THERE ARE SO MANY DIFFERENT LEARNING STYLES AND JUST AS MANY TEACHING STYLES. WHY MUST I USE THESE DIFFERENT METHODS IN MY TEACHING?

Because each child receives and processes the information you give in different ways. You must reach as many students as possible by teaching in a way which causes this processing to occur. You must also ask questions which will initiate the student's processing ability.

METHODS OR RESOURCES WHICH COMPLEMENT LEARNING STYLES THAT APPEAR NOT TO FLOURISH IN A CONVENTIONAL INSTRUCTIONAL SETTING

<table>
<tr><th>Method or Resource</th><th>Learning Style Characteristics to Which It Responds</th><th>Learning Style Characteristics to Which It Does Not Respond</th><th>Learning Style Characteristics To Which It Can be Accomodated</th></tr>
<tr><td>1. Programmed Learning</td><td>Motivation, persistence, responsibility, and a need for structure; a need to work alone, a visually-oriented student.</td><td>A lack of motivation, persistence or responsibility; a need for flexibility or creativity; a need to work with peers or adults; auditory, tactual or kinesthetic perceptual strengths.</td><td>Sound, light, temperature, and design; a need for intake, appropriate time of day, and a need for mobility.</td></tr>
<tr><td colspan="4">NOTE: When programmed learning sequences are accompanied by tapes, they will appeai to auditory learners; when they include films or filmstrips, they will reinforce the visually-oriented student; when teachers design small-group techniques such as team learning, circle of knowledge or brainstorming, peer-oriented students may develop an ability to use programs more effectively than if they use them exclusively as individual learners.</td></tr>
<tr><td>2. Contract activity</td><td>A need for sound and an informal design; motivation, persistence and responsibility; a need to work either alone, with a friend or two, or with an adult, all perceptual need for mobility.</td><td>None</td><td>Sound, light, temperature,and design; motivation, persistence, responsibility; sociological needs; perceptual strenths, intake, time of day, and the need for mobility.</td></tr>
<tr><td colspan="4">NOTE: Contract activity packages respond to all learning style characteristics provided that (1) they are used correctly, and (2) multi-sensory resources are developed as part of them.</td></tr>
<tr><td>3. Instructional package</td><td>A need for sound or structure, a need to work alone; all perceptual strengths.</td><td>A lack of responsibility; a need for peer or adult interactions.</td><td>Light, temperature, and design; motivation, persistence; intake, time of day, and mobility.</td></tr>
<tr><td colspan="4">NOTE: Because of their multisensory activities, instructional packages are very effective with slow learners. Unless the curriculum is extremely challenging, they may be boring to high achievers.</td></tr>
<tr><td>4. Task cards and learning circles.</td><td>Motivation, persistence, responsibility, and the need for structure; visual or tactual strengths.</td><td>A lack of motivation, persistence, responsibility, or a need for structure; auditory or kinesthetic strengths; a need for mobility.</td><td>Sound, light, temperature, and design; the need to work alone, with peers, or an adult; intake and time of day.</td></tr>
<tr><td>5. Tapes, audio cassettes</td><td>A need for sound; motivation, persistence, responsibility, and a need for structure; a need to work alone; auditory strengths.</td><td>A need for silence; a need to work with peers or an adult; visual, tactual, or kinesthetic strengths, and a need for mobility.</td><td>Light, temperature, and design; intake and time of day.</td></tr>
</table>

SOURCE: Rita Dunn and Kenneth Dunn, Teaching Students Through Their Individual Learning Styles: A Practical Approach. Reston, Virginia: Reston Publishing Company, division of Prentice-Hall, 1978, p. 23.

TABLE I

Characteristics Of Students Of Different Learning Styles[1]

STUDENT LEARNING STYLE

Need very much structure

Characteristics

Short attention span.

Like to be active; there is constant movement.

A lot of physical and verbal fights.

Do not know how to function in group situations or discussion.

Incapable of thinking through a problem; will guess and let it go at that.

Try the rules often.

Work only because the teacher says and look to peers for approval.

Teaching Approaches

Have definite and consistent rules - let them know what is expected of them.

Give specific guidelines and instructions (step - by - step), even make a chart of the steps.

Make goals and deadlines short and definite (give them the topic, how many lines / pages, how it is to be done and the exact date it is due).

Provide a variety of activities during the period, incorporating some physical movement whenever possible.

Make positive comments about their attempts; give immediate feedback on each step; give much assurance and attention; praise often.

Use pictures and things they can see, feel and touch.

Get them to work immediately and change the pace often.

Display their work; it's a form of reinforcement which they like.

Capitalize on their interests to assist them in learning the various reading skills, i.e., stories or projects dealing with cars with Grade 9 boys.

Begin with factual material before attempting a discussion.

Move gradually from seat work to discussion; provide more group work as they are able to handle it.

Leave them at the end of each period with the satisfaction of having learned new material and having success in what they have been studying - almost a complete lesson each period with a minor carryover to the next period and the mention of something interesting to come.

Read to them; it helps extend their attention span and enhance listening skills.

Give short quizzes and objective tests initially.

Provide opportunities for choice and decision making as they appear ready for them.

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[1] David E. Hunt, "Learning Styles and Student Needs: An Introduction to Conceptual Level," Student Learning Styles: Diagnosing and Prescribing Programs, NASSP 1979, pp. 35-38.

TABLE II

Characteristics Of Students Of Different Learning Styles[2]

STUDENT LEARNING STYLE

Need much structure

Characteristics

Oriented to the role of a 'good student,' one who gets the right answers, has neat work and good work habits.

Seek teacher approval.

Want to work alone at their own desks.

Incapable of adjusting to a different teacher.

Upset by visitors or alterations of the schedule.

Do not express personal opinions.

Are confused by choices.

Want to be told and have the teacher constantly present.

Teaching Approaches

Arrange students initially in rows and gradually get them working in pairs, then in small groups.

Have definite and consistent rules - let them know what is expected of them.

Use creative drama to encourage spontaneity, self-awareness and cooperation.

Help them to know what to do each day. Some teachers found that initialing the students' work daily provided the teacher contact they desired and the impetus to continue. They could see how much they had accomplished.

Provide non-threatening situations where they have to risk an opinion.

Provide a lot of praise and success-oriented situations.

Give them group problems to encourage sharing.

Provide opportunities for choice and decision making as they appear ready for them. Push them gently into situations where they have to make decisions and take responsibility.

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[2] Ibid.

TABLE III

Characteristics Of Students Of Different Learning Styles[3]

STUDENT LEARNING STYLE

Need less structure

Characteristics

Like to discuss and argue.

Everybody wants to talk at once and nobody listens.

Will question and volunteer additional information.

Want to solve things themselves.

Go off on sidetracks.

Do not require teacher rewards.

Are imaginative.

Are not afraid of making mistakes.

Are enthusiastic and eager to go off on things on their own.

See alternatives.

Are adverse to detail and can not tolerate going step-by-step.

May be initially self-centered and less concerned about others.

Teaching Approaches

Allow them to select their own seats.

Give them several topics from which to choose.

Set weekly (or longer) assignments and allow students to make up their own timetables.

Encourage them to use each other as resources.

Allow more mobility and give them more opportunities to take part in planning and decision making. If they are given the freedom to pursue things on their own, they will continue on their own without question.

Have them work in groups with the teacher serving as a resource person.

Approach material at a more abstract or general level. You can start out with a discussion and then go to the facts of the material.

Train them to listen to instructions (and to listen in general) as they tend to go off on their own.

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[3] Ibid.

Overview To Instrumentation

FIGURE I

Methodology Preference Defined by Trial Lessons

Study	Methodology Preference	Criterion Used	Significant Results
Mills [1955]	A,V,K,C	Mills Learning Methods Test	Yes
Coleman [1962]	A,V,K,C	Mills Learning Methods Test	Yes
Manwarren [1972]	A-V, V-A, LWS, LEA	Ray Reading Methods Test and Reading Achievement	Yes
Young [1975]	A-V, V-A LWS, LEA	Ray Reading Methods Test	Yes
Treadway [1975]	A-V, V-A, LWS, LEA	Ray Reading Methods Test	Yes
Vandever and Neville [1974]	A,V,K	A = letter sound V = meaning and distinctive K = words were textured and Reading Achievement	Yes

A = Auditory Method
V = Visual Method
K = Kinesthetic Method
C = Combination Method

A-V = Auditory-Visual Method
V-A = Visual-Auditory Method
LWS = Linguistic Word Structure Method
LEA = Language Experience Method

FIGURE II

Sensory Modality Preference Matched With Method

Study	Modality Preference	Teaching Methods Used	Significant Results
deHirsh, Jansky & Langford [1966]	A,V,K	Basal program with and without supplemental phonics	No
Harris [1965]	A,K	Language Experience with reinforcement in preference	No
Robinson [1968]	A,V	A = Hay-Wingo Phonics V = Basal reader	No
Bateman [1968]	A,V	A = Sound-symbol Approach V = Basal reader	No
Bruininks [1968]	A,V	Modified Mills Learning Methods Test	No
Freer [1971]	A,V	A = Auditory method V = Basal approach	No
McCarthy [1971]	A,V	Ray Reading Methods Test	No
Ringler, Smith & Cullinan [1971]	A,V,K	Bank Street Reader with small group instruction in preferred method	No
Waugh [1973]	A,V,K	A = Auditory Method V = Visual feedback	No
Bohning [1973]	A,V	A = Auditory feedback V = Visual feedback	No
Miller [1974]	A,V	A = Palo Alto Reading Program V = Bank Street Readers	No
Scott [1973]	A,V,K	American Basic Reading Program with 20 minutes of instruction in preferred method	No

A = Auditory Preference

V = Visual Preference

K = Kinesthetic Preference

Kindergarten Screening Test

Dorothy Young

The inventory is:

> a test given to determine the pre-reading abilities of kindergarten children. The test was designed as part of the results of an extensive study that was conducted in two stages. The first portion of the study was the administration of tests for the identification of modality preference. The second stage was a teaching/learning experience whereas four different methods of reading were presented to each pupil in kindergarten.

Applications or Implications:

> Both individual and group evaluative subtests included. The instrument was constructed under the assumption that results from the screening could be easily utilized by the classroom teacher in providing differentiated reading instruction.

Teacher Assessment of Student Learning Styles Paragraph Completion Method (PCM)

David E. Hunt

Learning style describes students in terms of those educational conditions under which they are most likely to learn and essentially describes the amount of structure individuals require.

Teacher Assessment of Student Learning Styles is:

> observations based on student reactions to systematic teacher/introduced changes in structure.

Paragraph Completion Method (PCM) is:

> a semi-projective method which assesses conceptual level. Students write responses to a posed topic. For use with grade 6 to adult levels. Approximate administration time: 20 minutes.

Application or Implications:

> Matching educational approaches to student learning style facilitates academic achievement.

> Conceptual level, in terms of learning style, is a developmental phenomenon which ranges from the "unsocialized" to the "independent." Knowledge of learning style can influence and enhance the development of conceptual level.[1]

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[1] Dunn, DeBello, Brennan, Krimsky, Murrain, "Learning Style Researchers Define Differences Differently," Educational Leadership, February 1981, p. 374. [Reprinted with permission of the Association for Supervision and Curriculum Development. All rights reserved.]

Description of Learning Style Inventories

Learning Style Inventory

Canfield and Lafferty

Individual learning style is derived from:

* academic conditions

  (relations with instructor and peers)

* structural conditions

  (organization and detail)

* achievement conditions

  (goal setting, competition)

* content

  (numbers, words, etc.)

* mode of preferred learning

  (listening, reading, iconic and direct experience)

* expectation of performance level

  (superior through satisfactory)

The inventory is:

a self-report instrument based on a rank ordering of choices for each of 30 questions. For use with junior high through adult levels. Approximate administration time: 15 minutes.

Applications or Implications:

Major use is to develop instructional materials for whole class or individual students. The test is viewed as a tool to aid in understanding students' difficulties in completing academic units for counseling.

Emphasis on attitudinal and affective dimensions in the inventory strengthens such application.[2]

---

[2] Ibid., p. 374.

Gregorc Style Delineator

Anthony F. Gregorc

Learning style consists of distinctive, observable behaviors that provide clues to the functioning of people's minds and how they relate to the world. Those "mind" qualities suggest that people learn in combinations of dualities:

concrete-sequential
concrete-random
abstract-sequential
abstract-random

Preferences for a particular set constitutes a learning style.

The inventory is:

> a self-report instrument based on a rank ordering of four words to each of 10 sets. For use with upper junior high/adult levels. Approximate administration time: 5 minutes.

Applications or Implications:

> Strong emphasis is placed on the matching of instructional materials and methods to meet the range of individual preferences. Gregorc also recommends that selected nonpreferences be utilized at times to encourage students to strengthen those areas.[3]

Myers-Briggs Type Indicator

Isabel Briggs Myers and
Katharine C. Briggs

The Inventory was developed:

> to facilitate theory of psychological types, which says that variations in behavior which may seem random are actually consistent and orderly when one understands differences in the ways people prefer to take in information and make decisions.

Applications or Implications:

> Four preferences are scored: EI (Extraversion and Introversion), SN (Sensing and Intuition, the two kinds of perception), TF (Thinking and Feeling, the two kinds of judgment) and JP (the Judging or Perceptive attitude for dealing with the environment). The four scores combine to generate sixteen types, each with its own characteristics and gifts, its own road to excellence and its own pitfalls to be avoided. Isabel Myers wrote a description for each type, in non-technical language, which is based on theory and empirical research; descriptions focus on the strengths of each type and mention possible probelms before full development is reached.[4]

---

[3] Ibid., p. 375.

[4] CAPT-MBT1, Center for Application of Psychological Type, N.D. [Reprinted with permission]

Learning Style Inventory

David Kolb

Learning style is a result of hereditary equipment, past experience and the demands of the present environment combining to produce individual orientations that give differential emphasis to the four basic learning modes postulated in experiential learning theory:

Concrete Experience (CE)

Reflective Observation (RO)

Abstract Conceptualization (AC)

Active Exerpimentation (AE)

The inventory is:

a self-report instrument based on a rank ordering of four possible words in each of nine different sets. Each word represents 1 of the 4 learning modes: feeling (CE) watching (RO); thinking (AC); doing (AE). For use with young adults. Approximate administration time: 5-10 minutes.

Applications or Implications:

Emphasis is placed on individual awareness of personal learning style and available alternative modes. Knowledge of learning style differences should encourage the design of instructional experiences to enhance individual strengths and develop non-dominate orientation.[5]

Cognitive Style Interest Inventory

Joseph E. Hill

Cognitive style is the unique way in which an individual searches for meaning. It is reflected in the way:

* qualitative and theoretical symbols are handled
* cultural influences affect the meaning given to symbols
* meaning is derived from symbols that are preceived

The inventory is:

a self-report instrument based on a rank ordering which measures abstractions, visual, tactile and auditory perceptions, motor coordination and social interaction. For use with elementary/adult levels. Approximate administration time: 50 minutes.

Applications or Implications:

Cognitive Style Mapping identifies students strengths and weaknesses through major, minor and negligible categories. It serves as a basis for developing a personalized educational program which utilizes varied instructional modes to match students and the educational task.[6]

---

[5] op. cit., "Leaaning Style Researchers Define Differences Differently," p. 375.

[6] Ibid.

Inventory of Learning Processes

Ronald R. Schmeck

Learning style is the product of the organization of a group of information processing activities that individuals prefer to engage in when confronted with a learning task. Those activities range from [a] deep and elaborative to [b] shallow, repetitive and reiterative.

The inventory is:

> a 62-item, true/false, self-report inventory grouped via factor analysis into synthesis / analysis, study methods, fact retention, and elaborative processing. Approximate administration time: 20 minutes.

Applications or Implications:

> Students should be encouraged to develop a learning style which is thoughtful, deep and elaborative.
>
> Through the use of specific instructional strategies, teachers should discourage shallow reiterative information processing.[7]

---

[7] Ibid.

Eysenck Personality Questionnaire

H. J. Eysenck

The inventory is:

> Personality questionnaire: designed to measure constructs of introversion and extraversion. Inventory stresses the inherited differences between people in the ways their nervous system functions.

Learning Style Inventory (LSI)

Dunn, Dunn, Price

Learners are affected by their preferences:

* environmental

(sound, light, temperature and the need for either a formal or informal design)

* emotional

(motivation, persistence, responsibility and the need for either structure or options)

* physical

(perceptual strengths, need for intake, time of day or night energy levels, and need for mobility)

The inventory is:

a self-report instrument based on a rank ordering of choices for each of 104 items. For use with grades 3-12. Approximate administration time: 30 minutes.

Applications or Implications:

The LSI is designed to diagnose individual learning characterisitcs. Accompanying manuals suggest prescriptions to complement selected styles to facilitate academic achievement.[8]

Sixteen Personality Factor Questionnaire

Raymond Cattell

The inventory is:

Personality questionnaire used to measure the constructs of introversion and extraversion. Ideal to be used as a self-report inventory.

---

[8] Ibid., p. 374.

Reading Style Inventory

Marie Carbo

The inventory is:

Diagnostic reading tests designed for grades 1-12. The battery can be administered to one student at a time or to the entire class in about 30 minutes.

Applications or Implications:

After administering the RSI individual reading style, profiles can be ordered. The profile contains a description of the student's style preference, strengths and weaknesses; specific teaching strategies plus reference pages in the RSI Manual.

Learning Style Inventory: Class Set

Renzulli and Smith

The inventory includes:

30 student forms, 1 teacher form and computer scoring. The instrument itself consists of 65 items designed to measure student attitude toward nine modes of instruction, including projects, independent study, lecture and discussion. All forms are prepared on optical scanning sheets and require approximately 30 minutes to complete. Designed for Upper Elementary/Junior High.

Applications or Implications:

Computer scoring results in a variety of easy-to-interpret reports including listings of students' most and least preferred styles and groupings of students by learning style preference.[9]

Child Rating Form

Ramirez and Castaneda

Cognitive style differences (field independent/field sensitive) and cultural indifferences create individual learning styles. Because learning style is not permanently fixed, it is possible to intervene and affect it.

The inventory has:

direct observation checklist format, yielding frequency of behavior scales, is completed by the teacher; it is suggested that older students can rate themselves. Approximate administration time:

Applications or Implications:

Identification of cognitive style is used both to match and mismatch learning and teaching styles. The goal is to encourage personal "bicognitive ability" that reduces favoring one style over another continually.[10]

---

[9] Reprinted from a brochure by The Creative Learning Press, Inc., 1983-84.

[10] op. cit., "Learning Style Researchers Define Differences Differently," p. 375.

Trial Lessons

Trial Lessons

Background

In 1955, Mills developed the *Mills Learning Methods Test*, which was a trial lesson designed to assist the teacher in determining the learning method best suited for the individual child. He proposed to determine the teaching method or combination of methods most effective in teaching word recognition to various types of individuals. Results from the study showed that no one method was best for all children. In beginning reading, children with lower capabilities responded least well to the phonic method while the tactual-kinesthetic method was found to be the best method for these students. Children of average ability showed an equal preference for the auditory or visual method, while the tactual-kinesthetic method was the least effective. The children of high ability learned readily regardless of method. Mills recommended that a diagnostic study of students was needed to determine the most appropriate method to be used.

The *Ray Reading Methods Test* (RRMT) was developed in 1970. This test was developed to provide information related to a child's preferred method of reading. Mill's test was designed for children seven, eight or nine; however, the *Ray Reading Methods Test* was designed to be appropriate for children ages four, five and six. The test could be administered in groups up to five members. Results from studies relative to Methodology preferences defined by trial lessons are summarized by Ray on page 44.

Ray Reading Methods Test (RRMT)

Darrel D. Ray

The test was developed to provide the teacher and/or clinician with a technique of evaluating the preferred learning method(s) of children in the process of beginning to read.

Ray concluded from an evaluation of methods currently available to the teacher that there appears to be four methods of reading instruction in use. These methods are identified as the:

Visual - Auditory Method in which the initial stage of learning the configuration of a total word is used for instruction with pictures and verbal context clues providing the vehicle of instruction.

Auditory-Visual Method of reading instruction that has the letter as the basic unit of instruction. The learner must accumulate a number of sound-symbol associations and use these in synthesizing and decoding words.

Linguistic Word Structure Method of reading instruction that has the word pattern as the basic unit of instruction where letter names are taught and spelling patterns are accumulated. A learner generalized application is restricted to words having consistent spelling patterns.

Linguistic - Language Experience Method of reading instruction that utilizes the meaningful structure of the learners' own language to provide the basic unit of instruction. The oral communication patterns of the learner are recorded as stories to be visually recognized.

The RRMT was designed to evaluate the performance of children by measuring the response to teaching / learning experiences utilizing each of the four methods. If a child's raw score on the seventy-two hour test of recall is seven or more out of a possible ten, the prognosis has been completed since a score of seven or more indicates the child is predicted to be successful in this method.

Each of the four methods employs identical time allotments and instructional sequence, while the ten words to be taught and the specific teaching materials and procedures vary with the individual methods.

The Ray Reading Methods Test was designed to be appropriate for children ages four, five and six and can be administered in groups of up to five members.

Each child is asked to respond to four delayed recall scores, one for each method. If all methods are equally effective in teaching the child, then all the scores will be the same.

Predictive Batteries

Predictive Batteries Related To Learning Styles

Predictive batteries are a group of selected educational tests, usually standarized on the same population, which yield separate scores for different aspects of achievement. It is a test of knowledge of, or proficiency in something learned or taught, especially, a test of the effects of specific instruction or training.

Marie Carbo's Reading Style Inventory, based on the Dunn and Dunn model, was developed to diagnose the learning styles of youngsters specifically for reading. The test was used to investigate the learning styles of students as related to 18 elements of reading style.

The inventory diagnoses individual reading styles and lists methods, materials and strategies that are recommended for individual students based upon computer analysis of the data received from the students in grades 1-12.

After administering the RSI, individual reading style profiles can be ordered. The profile contains a description of the student's style preference, strengths and weaknesses, specific teaching strategies plus reference pages in the RSI Manual.

The Kindergarten Screening Test is a test given to determine the pre-reading abilities of kindergarten children. The test was designed as a part of the results of an extensive study that was conducted in two stages (Young & Treadway, 1975). The first portion of the study was the administration of tests for the identification of modality preference. The second stage was a teaching-learning experience whereas four different methods of reading were presented to each pupil in kindergarten (Ray Reading Methods Test, 1970).

The test consists of both individual and group evaluative subtests. The instrument was constructed under the assumption that results from the screening could be easily utilized by the classroom teacher in providing differentiated reading instruction at the first grade level.

Self-Reporting Inventories

THE LEARNING STYLE INVENTORY

Dunn, Dunn, Price

The Learning Style Inventory, based on factor analysis, is a comprehensive approach to the diagnosis of an individual's learning style. This instrument, a useful tool in analyzing the conditions under which students prefer to learn, assesses individual preferences in the following areas:

(a) environmental
[sound, light, temperature and design]

(b) emotional
[motivation, responsibility, persistence and structure]

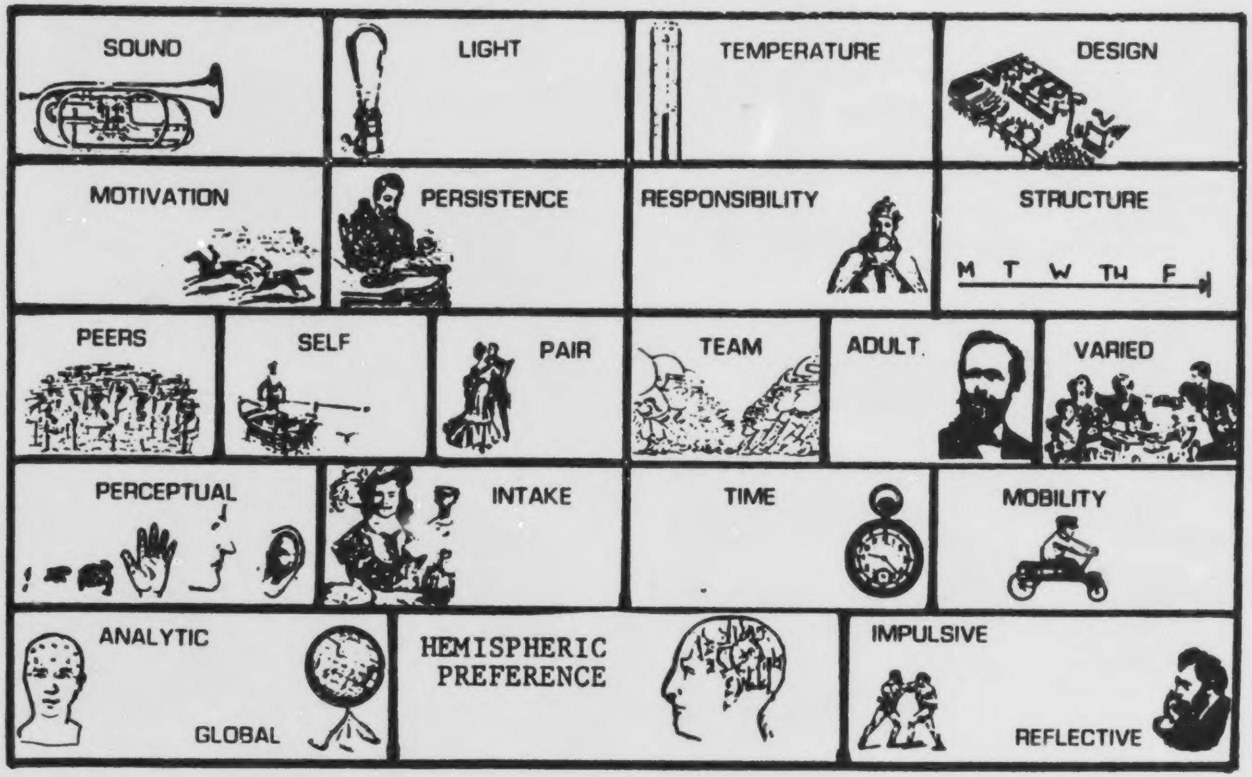
(c) sociological needs
[self, pair or peer oriented; adult, team or combined ways]

(d) physical needs
[perceptual preference(s), time of day, intake and mobility]

(e) psychological
[analytic or global, hemisphere preference, impulsive or reflective]

The learning style inventory will permit students to identify how they prefer to learn and will also indicate the degree to which their responses are consistent. It will provide a computerized summary of each student's preferred learning style, as well as suggest strategies for instruction.

DIAGNOSING LEARNING STYLES



STIMULI	ELEMENTS
ENVIRONMENTAL	SOUND LIGHT TEMPERATURE DESIGN
EMOTIONAL	MOTIVATION PERSISTENCE RESPONSIBILITY STRUCTURE
SOCIOLOGICAL	PEERS SELF PAIR TEAM ADULT VARIED
PHYSICAL	PERCEPTUAL INTAKE TIME MOBILITY
PSYCHOLOGICAL	ANALYTIC GLOBAL HEMISPHERIC PREFERENCE IMPULSIVE REFLECTIVE

DESIGNED BY: RITA DUNN
KENNETH DUNN

Informal
Checklist

TIME TEST

Name______________________________ Date____________________

Directions: Answer TRUE or FALSE to each of the following questions. TRUE FALSE

1. I usually hate to get up in the morning. ____ ____
2. I usually hate to go to sleep at night. ____ ____
3. I wish I could sleep all morning ____ ____
4. I stay awake for a long time after I get into bed. ____ ____
5. I feel wide awake only after 10:00 in the morning. ____ ____
6. If I stay up very late at night, I get too sleepy to remember anything. ____ ____
7. I usually feel a "low" after lunch. ____ ____
8. When I have to do a task requiring concentration, I like to get up early in the morning to do it. ____ ____
9. When I can, I do my most concentration-requiring tasks in the afternoon. ____ ____
10. I usually start the tasks that require the most concentration after dinner. ____ ____
11. I could stay up all night. ____ ____
12. I wish I didn't have to go to work before noon.
13. I wish I could stay home during the day and go to work at night. ____ ____
14. I like going to work in the morning. ____ ____
15. I can remember things best when I concentrate on them:
    - a. in the morning ____ ____
    - b. at lunchtime ____ ____
    - c. in the afternoon ____ ____ Answer all the questions a - f
    - d. before dinner ____ ____
    - e. after dinner ____ ____
    - f. late at night ____ ____

EARLY MORNING		LATE MORNING		AFTERNOON		EVENING	
True	False	True	False	True	False	True	False
___ 3	___ 7	___ 3	___ 7	___ 6	___ 5	___ 6	___ 5
+		+		+		+	
____ 10		____ 10		____ 11		____ 11	

DESIGNED BY: Dr. Rita Dunn and Dr. Kenneth Dunn.

TIME SCORE SHEET

AFTERNOON		EVENING		EARLY MORNING		LATE MORNING	
True	False	True	False	True	False	True	False
3	7	2	6	8	1	5	3
5	8	4	8	14	3	12	8
9	11	5	14	15a	5	15b	9
12	13	10			10		10
15c	13	11			11		11
15d	14	13			12		13
		15e			13		14
		15f					
6	5	8	3	3	7	3	7
+		+		+		+	
10		11		10		10	

	EARLY MORNING	LATE MORNING	AFTERNOON	EVENING
11				
10				
9				
8				
7				
6				
5				
4				
3				
2				
1				
0				

Designed by: Dr. Rita Dunn and Dr. Kenneth Dunn.

SWASSING-BARBE CHECKLIST OF OBSERVABLE MODALITY STRENGTH CHARACTERISTICS

Area Observed	Visual	Auditory	Tactual-Kinesthetic
Learning Style	☐ Learns by seeing; watching demonstrations	☐ Learns through verbal instructions from others or self	☐ Learns by doing; direct involvement
Reading	☐ Likes description; sometimes stops reading to stare into space and imagine scene; intense concentration	☐ Enjoys dialogue, plays; avoids lengthy description; unaware of illustrations; moves lips or	☐ Prefers stories where action occurs early; fidgets when reading, handles books; not an avid reader
Spelling	☐ Recognizes words by sight; relies on configuration of words	☐ Uses a phonics approach; has auditory word attack skills	☐ Often is a poor speller; writes words to determine if they "feel" right
Handwriting	☐ Tends to be good, particularly when young; spacing and size are good; appearance is important	☐ Has more difficulty learning in initial stages; tends to write lightly; says strokes when writing	☐ Good initially, deteriorates when space becomes smaller; pushes harder on writing instrument
Memory	☐ Remembers faces, forgets names; writes things down, takes notes	☐ Remembers names, forgets faces; remembers by auditory repetition	☐ Remembers best what was done, not was seen or talked about
Imagery	☐ Vivid imagination; thinks in pictures, visualizes in detail	☐ Subvocalizes, thinks in sounds, details less important	☐ Imagery not important; images that do not occur are accompanied by movement
Distractibility	☐ Generally unaware of sounds; distracted by visual disorder or movement	☐ Easily distracted by sounds	☐ Not attentive to visual, auditory presentation so seems distractible
Problem Solving	☐ Deliberate; plans in advance, organizes thoughts by writing them; lists problems	☐ Talks problems out, tries solutions verbally, subvocally; talks self through problem	☐ Attacks problems physically; impulsive; often selects solution involving greatest activity
Response to Periods of Inactivity	☐ Stares; doodles, finds something to watch	☐ Hums; talks to self or to others	☐ Fidgets; finds reasons to move; holds up hand

Response to	☐ Looks around; examines structure	☐ Talks about situation, pros and cons, what to do	☐ Tries things out; touches, feels, manipulates
Emotionality	☐ Somewhat repressed; stares when angry; cries easily, beams when happy; facial expression is a good index of emotion	☐ Shouts with joy or anger; blows up verbally but soon calms down; expresses emotion verbally and through changes in tone, volume, pitch of voice	☐ Jumps for joy; hugs, tugs, and pulls when happy; stamps, jumps, and pounds when angry, stomps off; general body tone is a index of emotion
Communication	☐ Quiet; does not talk at length; becomes impatient when extensive listening is required; may use words clumsily; describes without embellishment; uses words such as see, look, etc.	☐ Enjoys listening but cannot wait to talk; descriptions are long but repetitive; likes hearing self and others talk; uses words such as listen, hear, etc.	☐ Gestures when speaking; does not listen well; stands close; when speaking or listening; quickly loses interest in detailed verbal discourse; uses words such as get, take, etc.
General Appearance	☐ Neat, meticulous, likes order, may choose not to vary appearance	☐ Matching clothes not so important, can explain choices of clothes	☐ Neat, but soon becomes wrinkled through activity
Response to the Arts	☐ Not particularly responsive to music; prefers the visual arts; tends not to voice appreciation of art of any kind, but can be deeply affected by visual displays; focuses on details and components rather than the work as a whole	☐ Favors music; finds less appeal in visual art, but is readily able to discuss it; misses significant detail, but appreciates the work as a whole; is able to develop verbal association for all art forms; spends more time talking about pieces than looking at them	☐ Responds to music by physical movement; prefers sculpture; touches statues and paintings; at exhbits stops only at those in which he/she can become physically involved, comments very little on any art form

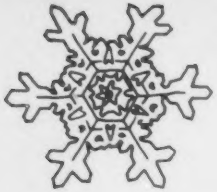
SOURCE: Teaching Through Modality Strengths: Concepts and Practices. Copyright 1979, Zaner-Bloser, Inc., Columbus, Ohio. Reprinted by permission.

FIND YOUR MODALITY STRENGTHS

Listed below are ten incomplete sentences and three ways of completing each sentence. Check the statement that is most typical of you. Then count the number of checks in each column. This will give you a rough idea of the relative strength of each of your modalities.

1. My emotions can often be interpreted from my:	( ) Facial expressions	( ) Voice quality	( ) General body tone
2. I keep up with current events by:	( ) Reading the newspaper thoroughly when I have time	( ) Listening to the radio or watching the television news	( ) Quickly reading the paper or spending a few minutes watching television news
3. If I have business to conduct with another person, I prefer:	( ) Face-to-face meetings or writing letters	( ) The telephone, since it saves time	( ) Conversing while walking, jogging, or doing something physical
4. When I'm angry, I usually:	( ) Clam up and give others the "silent treatment"	( ) Am quick to let others know why I'm angry	( ) Clench my fists, grasp something tightly, or storm off
5. When driving I:	( ) Frequently check the rear view mirrors and watch the road carefully	( ) Turn on the radio as soon as I enter the car	( ) Can't get comfortable in the seat and continually shift position
6. I consider myself:	( ) a neat dresser	( ) a sensible dresser	( ) a comfortable dresser
7. At a meeting I:	( ) come prepared with notes and displays	( ) enjoy discussing issues and hearing other points ov view	( ) would rather be somewhere else and so spend my time doodling
8. In my spare time I would rather:	( ) watch television, go to a movie, attend the theatre, or read	( ) listen to the radio or records, attend a concert or play an instrument	( ) engage in a physical activity of some kind
9. The best approach to discipline is to:	( ) isolate the child by separating him or her from the group	( ) reason with the child and discuss the situation	( ) use acceptable forms of corporal punishment
10. The most effective way of rewarding students is:	( ) positive comments written on their papers, stick-ons or posting good work for others to see	( ) oral praise to the student and to the rest of the class	( ) a pat on the back, a hug, or some other appropriate physical action
TOTAL NUMBER OF BOXES CHECKED	___ visual	___ auditory	___ tactual-kinesthetic

SOURCE: "Modality," Instructor (January 1980). Used with permission from Zaner-Bloser, Inc., Columbus, Ohio. Copyright 1980.



LEARNING STYLE CHECKLIST

Environment

_____ minimal distractions

_____ rich in stimuli

_____ "busy" environment

_____ formal organization

_____ informal organization

Thinking/Problem Solving Strategies

_____ likes step-by-step learning

_____ uses concrete experiences

_____ careful attention to detail

_____ leaps to broad generalizations

_____ overviews task first, then proceeds

_____ approaches problem from beginning to end (problem → solution → implementation → evaluation)

_____ uses abstract categories or examples

_____ focus on the main ideas

_____ needs someone else to set up structure

_____ wants to set up personal structure

Classroom Orientation

_____ prefers direct, practical orientation

_____ prefers personal and group orientation

_____ prefers theoretical, analytical orientation

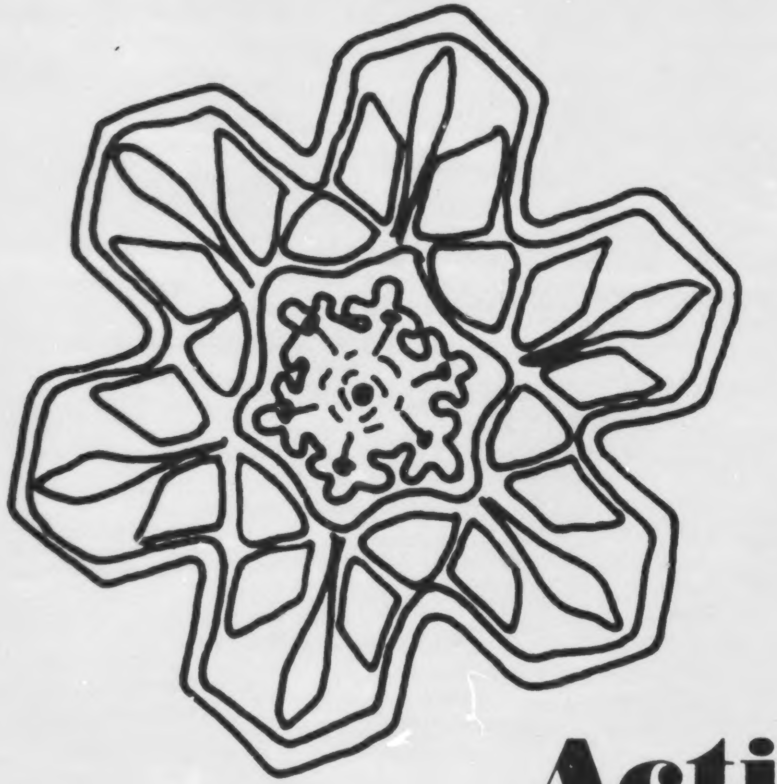
_____ prefers application orientation

_____ prefers varied approaches

C. A. Kass, Oklahoma City University, 1982. [Used with permission.]

Learning is a process of such infinite complexity that it can be observed and studied from a great many angles. The topic presents us with a problem which is beyond our powers to comprehend. We therefore have to content ourselves with aspects that are of particular interest to us and with rules of thumb which emerge from the study of these aspects.

— Dr. Anthony F. Gregorc



Activities

Key To Learning Styles

K = Kinesthetic

T = Tactual

V = Visual

A = Auditory

K, T, V, A

Activities

TITLE: Ten Little Spacemen

GRADE LEVEL: K-2

CURRICULUM AREA(S): Math, Music, P.E.

1. Arrange students in row(s) or in a circle.
2. Let students take turns as leader of action indicates in each verse of song. (Repeat as necessary so all students will get a chance to be leading spaceman.) [When a girl is the leader change to female pronoun - her.]

1 little, 2 little, 3 little spacemen;
4 little, 5 little, 6 little spacemen;
7 little, 8 little, 9 little spacemen;
10 spacemen in a row.

The 1st little spaceman shakes his right hand
The 1st little spaceman shakes his right hand
All the little spacemen shake their right hands
Standing in a row.

[Follow pattern above]

The 2nd little spaceman shakes his right foot . . .
The 3rd little spaceman shakes his left hand . . .
The 4th little spaceman shakes his left foot . . .
The 5th little spaceman shakes his shoulder . . .
The 6th little spaceman touches his nose . . .
The 7th little spaceman touches his elbow . . .
The 8th little spaceman taps his right heel . . .
The 9th little spaceman taps his left heel . . .
The 10th little spaceman shakes it all around . . .

SOURCE: High Flight - Aerospace Activities, K-12, OK: State Department of Education, 1982.

TITLE: Fill It In

GRADE LEVEL: K-6

CURRICULUM AREA(S): Language Arts

For listening and comprehension, a parent could read an article, leave out an occasional word, and allow the children to supply the missing word so the sentence will make sense.

SOURCE: Reading: Parents, Kids, Teachers, Inc., OK: State Department of Education, 1982.

K
T
V
A

TITLE: Pollution Mobiles

GRADE LEVEL: 4-6

CURRICULUM AREA(S): Health, Science, Social Studies

This activity involves the collection of pollutants that would possibly be found in local waterways. Children bring various items that they feel would harm the environment.

Each item is suspended by yarn or string from coat hangers that hang from the ceiling. These "Mobiles from trash" create an interesting effect and are unusual.

After studying the various kinds of pollutants, discuss which one is the major problem in your city and how this differs from pollutants in other cities.

SOURCE: Touching, Living, Growing. . .Elementary Social Studies, OK: State Department of Education, 1981.

K
T
V
A

TITLE: Making a Super 8mm Film

GRADE LEVEL: 4-6

CURRICULUM AREA(S): All

Select a poem or short story to illustrate. ("Ode: Intimations of Immortality from Recollections of Early Childhood" by William Wordsworth works well.)

Divide the class into 3 groups with preferably 5 or 6 per group.

Assign one section of the selection to each group. Each writes the scenes including camera angles, actors' directions, length of time, setting and narration.

Plan shooting times.

Shoot film according to the convenience of scenes.

SOURCE: Spectrum of Ideas---Activities for Teaching Effective Writing, Listening and Speaking Skills, OK: State Department of Education, 1982.

TITLE: Home Activities for Parents of Preschool and Kindergarten Children

GRADE LEVEL: Preschool and Kindergarten

CURRICULUM AREA(S): P.E., Readiness

Activities should be relaxed and enjoyable for the child. Help the child succeed. Activities should be unpressured and non-competitive.

1. Drying a child with a towel:
   a. say parts of body as drying: arm, hand, fingers, etc.
   b. use terms like "left" and "right" as drying, such as: left arm, right hand, etc.
2. Trapping: catch child in blanket, gently push and pull child so he or she can regain balance.
3. Whirl child slowly and have freeze (like game "Pretty and Ugly"). Whirl child, release and say, "FREEZE." Child must stop and balance in position.
4. Help child note differences and similarities in rocks by looking and touching. Use such language as: smaller, larger, round, smooth, rough, long, short, etc.
5. Have child sort silverware; socks.
6. Help child note differences and similarities in houses, trees, flowers, etc. Use language such as: color, size, shape, etc.
7. Take a walk. Help the child locate sounds: dog barking, bird chirping, etc. (Where is the sound coming from?)
8. Put water in two glasses at different levels. Tap the glass and let the child listen, then have the child close his/her eyes. You then tap one glass and have the child open eyes and tell you which glass you tapped. Begin with only two glasses. Can use pans instead of water in glasses, but be sure sounds are very different to start with. Can also use piano, but begin with at least one octave difference.
9. Have child match material of different textures by feeling.

SOURCE: Reading: Parents, Kids, Teachers, Inc., OK; State Department of Education, 1982.

K T V A

TITLE: Gingerbread Boy

GRADE LEVEL: K-3

CURRICULUM AREA(S): Art, Language Arts, Speech

Day 1 - Read Gingerbread Boy story to the class. Have students make chef hats using directions printed on a chart. Discuss plans for the baking of a gingerbread boy.

(Using a gingerbread cookie recipe, the students mix all ingredients and pat the dough into the shape of a 2 foot gingerbread man. Borrow a large pan from the school cafeteria.)

Day 2 - Bring ingredients and make arrangements to bake a gingerbread boy in the school cafeteria oven. Bake him in the morning and do not go back to get him until after lunch. Of course, when the whole class goes to get him, he is missing. The cafeteria cook has a note for the students to read. The notes that are written on the construction paper must be made and given to all school workers in your building. (First note says, "I have run away, look for me in the principal's office.") Make as many signs as desired and have each worker tell the children about their jobs when the students come to them in their search for the lost gingerbread boy. (The last message should say, "Look for me in your room.") When the class finally finds the gingerbread boy, they eat him!

Day 3 - Discuss the gingerbread adventure and have the class compose and illustrate an experience story. According to the class' penmanship skills, the story may be used in writing class.

The students may role play the gingerbread boy story in a puppet show.

SOURCE: Spectrum of Ideas - Activities for Teaching Effective Writing, Listening and Speaking Skills, OK: State Department of Education, 1981.

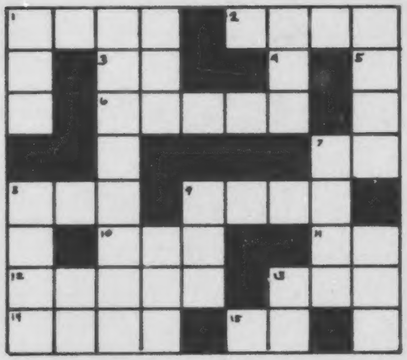
TITLE: Activities That Develop Student Independence

GRADE LEVEL: K-12

CURRICULUM AREA(S): Art, Journalism, Language Arts, Music, Social Studies, Speech

1. Make a miniature stage setting with pipe-cleaner figures to describe part of the information you learned about your topic. Display the stage setting and figures and give a two minute talk explaining what they represent and why you selected them.

2. Make a poster "advertising" the most interesting information you have learned. Display the poster and give a two-minute talk explaining why you found the information interesting.



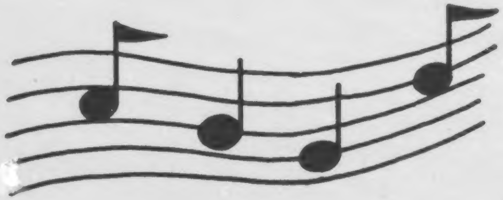
3. Broadcast a "book review" of your topic, as if you were a critic. Tape record the review and permit others to listen and tell you if they would now like to read the book, and why.

4. Construct a diorama to illustrate an important piece of information. Display the diorama and answer questions as an artist might.

5. Make a mural to illustrate the information you consider interesting. Display the mural and answer questions which may arise.

6. Make a time line, listing important dates and events in sequence. Display the time line and be prepared to answer questions about it. Ask a few people to "explain" your time line to you.

7. Write a song including information you learned. Sing the song in person or on tape for a small group of students.



8. Make up a crossword puzzle and let other students try to complete it. Check and return their answers to them.

9. Write a script for a radio or television program; produce and participate in this program. Present the program for a group of classmates.

10. Organize a file box for new words, arranging them under headings such as "Descriptive Words" or "Words With More Than One Meaning." Compile a list of words overused in class discussions, such as: fantastic, man, great, cool, uptight, pretty and touch. Find substitutes for these words and make a compilation for class references. Add the file box to the resource alternatives for your topic if they are appropriate.

11. Analyze the point of view of an author of a particular book. Read about the author in order to explain why he believes what he does. Tell at least three other classmates something you learned about the author which might account for his point of view in writing the book.

12. Write an article persuading people to your point of view by using biased words and appropriate propaganda devices. Analyze words with similar meanings to differentiate shades of meaning. List at least 20 such words.

13. Study the speeches and written work of a particular public figure, determine his motives and find possible hidden objectives, if any. List any clues which indicate the author's real beliefs.

14. Compile a reading notebook containing excerpts which are unusually expressive and make use of similes, metaphors or alliterations. Use the figures of speech to describe some aspect of your topic.

15. Describe a character in a story. Describe how the author developed the character and influenced the sentiments of the reader. Through a written, taped or oral report, share your thoughts with at least two or three classmates. Ask for their reactions to your findings.

SOURCE: "60 Activities That Develop Student Independence," Kenneth and Rita Dunn. Reprinted by special permission of LEARNING, The Magazine for Creative Teaching, February 1974. Copyright © by Pitman Learning, Inc., 19 Davis Drive, Belmont, CA 94002. Cost: $16 per year.

TITLE: 220 Dolch Basic Sight Words

GRADE LEVEL: 3

CURRICULUM AREA(S): Reading

Draw a long winding road on the chalkboard. Write basic sight words on the road. (See list of basic sight words on the pupil record.)

Give the child a piece of construction paper. Have him/her trace the outline of his/her foot on the paper and cut it out.

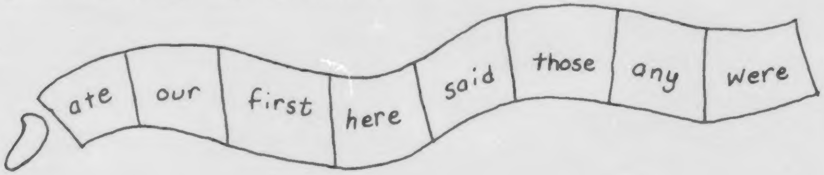
Tell the child he / she is to travel the length of the road. Using his/her foot as a marker, he/she is to move it from one word to the next saying each word as he/she goes.

If the child is unable to pronounce a word, have him/her stop on the road and write the word on his / her paper foot. Guide him/her in sounding out the word, stressing the initial and ending sounds and the vowel sounds whether regular or irregular.

The child should continue saying the words until the end of the road has been reached.

When finished, have the child trace over each word on his foot with a marker and read the words. Reinforce at a later time.

On another day practice other basic words in the same manner.



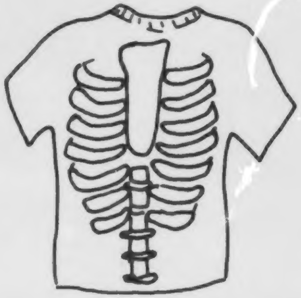
SOURCE: Used with permission from Teaching Reading Skills, Grade Three. Copyright 1981. Zaner - Bloser, Inc., Columbus, Ohio.

TITLE: Body Systems

GRADE LEVEL: 6

CURRICULUM AREA(S): Art, Health, Science

Class could be divided into small groups of students to study these systems of the body: circulatory, musculature, digestive and skeletal. As a part of that study, each student would bring a white tee shirt to paint on. Each small group could share a set of textile crayons and draw the system they were studying on either the front or back of the shirt. The small group could then model their shirts and make an oral presentation concerning the system to the rest of the class.

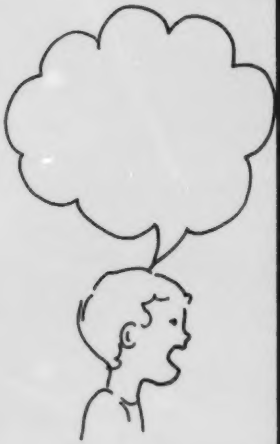


TITLE: Quotation Marks Used in Direct Quotes

GRADE LEVEL: 4-6

CURRICULUM AREA(S): Language Arts

Look at cartoons in the newspapers. Select some favorites; using different students for each character in the cartoon, let them read and/or act out the dialogue. Ask students to identify common elements of all the "clouds" in the cartoon strip. (They are all direct quotes of the character speaking.) Allow time for students to investigate the way direct quotes are recorded in paragraph form in books, magazines and newspapers.



Show how quotes are transferred from the cartoon "clouds" to the written page format using quotation marks, punctuation and the speaker's name with words like "said, answered". Solicit different terms to use instead of "said" such as "roared, moaned, inquired." Make a list of these words on the board.

Provide drawing tools such as free flowing felt markers, rolling writers (ball point-like pen), pencils or crayons. Select an event or happening of current interest to the students. Instruct students to design cartoon characters to engage in conversation regarding the event. This conversation will be written in the "clouds" which could be drawn on white paper, cut out and pasted on the backgrounds, or drawn into the design of each box. Ask students to focus on expressing the thoughts or feelings of the characters through the use of the lines.

SOURCE: Connections -- Linking the Arts to Basic Curriculum, OK: State Department of Education, 1980.

K T V A

TITLE: Story Time

GRADE LEVEL: K-4

CURRICULUM AREA(S): Art, Language Arts, Reading

Select a story with a great many "action words", colorful characters, which is short in length and current.

Have children design puppets (paper, felt or hand puppets).

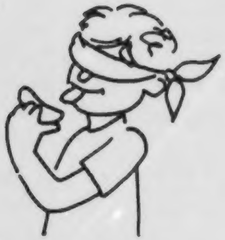
Allow active children to act out with characters (jump, stand, hop). Visual learners will enjoy seeing the puppets.

Auditory learners will receive input if music is integrated or a story is told by a reader.

Discussion for auditory learners will reinforce learning.

Re-creating the story by drawing or building in clay will help kinesthetic children.

SOURCE: Jacque Allen, Anadarko R.E.S.C.



K T V A

TITLE: Prospective Detective

GRADE LEVEL: K-3

CURRICULUM AREA(S): Health, Science

1. Blindfold each student.
2. Choose three different fruits and cut into bite size pieces.
3. Allow each student to smell, taste, feel and finally look at the fruit. (You will need three whole pieces of fruit for the students to feel and see.)
4. Discuss with the students each sense used to discover the three different fruits. (smelling, tasting, touching, seeing, hearing)
5. Lead the children into the discovery process of determining which sense was used less to identify the fruits (hearing).
6. Re-emphasize how we use our five senses to learn and understand new concepts.

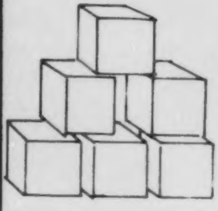
SOURCE: Cathy Keck, Phillips University, Enid, Oklahoma.

K T V A

TITLE: Communication Helps to Solve Problems

GRADE LEVEL: 1-3

CURRICULUM AREA(S): Communications



Before class starts, construct a complex building with blocks. When students arrive, divide the class into groups of four or five. Ask each group to build a building exactly like the one you have made. Tell some groups that they may talk to each other while building, and tell other groups that they may not talk. After the groups have finished their duplicates of your building, talk with the children about the experience. What things helped them to do the job? Was it easier to work together in the groups that talked or the groups that were quiet? What things did they talk about that helped them construct the building? Why was it harder to work together without talking to each other?

SOURCE: Classroom Learning Activities for Social Studies (CLASS), OK: State Department of Education, 1982.

K T V A

TITLE: Dateline USA

GRADE LEVEL: 4-9

CURRICULUM AREA(S): Social Studies

Have a United States map (or world map) on the bulletin board. Ask your students to bring newspaper stories to share. After they have found the location of the dateline, have them mark it with a push pin.

Have a follow-up discussion of the news item concerning where the event occurred and how it might affect us.

SOURCE: Classroom Learning Activities for Social Studies (CLASS), OK: State Department of Education, 1982.

TITLE: Planets

GRADE LEVEL: 3

CURRICULUM AREA(S): Science

1. Child will be able to name each planet.
2. Child will be able to compare planet characteristics.
3. Child will be able to demonstrate through models, the orbits of the planets.

Motivate and get the children involved before they read the lesson by putting up action bulletin boards.

1. Have students look out for photographs and information sent back to earth from the recent fly-bys of the planets made by Voyagers 1 and 2. Make a bulletin board display by using their materials.
2. Make a bulletin board display, mapping the planets orbiting the sun. You can also do this on your classroom ceiling using it as your sky.
3. Make cardboard space rocket lifting off, which contains a pocketful of things that have already been discovered by astronauts.

Tell the children some of the concepts they will cover or let them try to answer questions before they read in their science books. This will give them a reason for reading.

1. Try to locate planets in the sky. Local newspapers and astronomy magazines list when and where certain planets may be seen.
2. Pick out your favorite planet and find out more about it.
3. Find out what five planets can be seen from earth without using a telescope. Next, what five planets can be seen from each of those planets.
4. Using different sizes of balls or a picture of different sized circles, have the students choose the planets which would closely correspond to each ball or circle.
5. Using a picture of the planets orbiting the sun, or a model which can be made with styrofoam balls and wire, ask the students to tell or find out why planets orbit the sun at different speeds.
6. Write hot planets on one side of your paper and cold planets on the other. Try to list the planets that apply to each category. (Mercury, Venus, Earth and Mars are cold. Jupiter, Saturn, Uranus, Neptune and Pluto are the hot planets.)
7. Categorize the planets into two different classes according to size, the two classes being large and small planets. The four larger planets are called major planets.
8. Have a slide projector set up so students can view, on their own, slides of the planets.
9. Take students on field trips. Discuss with them what additional information you might learn about the planets if you viewed them through a telescope.
    a. Set up a time to go look through a telescope at your school.
    b. Take the students somewhere to look through one.

SOURCE: Lisa Tebow, Phillips University, Enid, Oklahoma.

TITLE: Parts of Speech

GRADE LEVEL: 1-6

CURRICULUM AREA(S): Language Arts

Have each student make his own Bingo card (squares of approximately one inch, five to seven squares across and down). Each student, by passing the sheet around, has others fill in a verb, noun, preposition, adverb, adjective, pronoun, etc., until filled. Each then makes a list of all words found on his/her card which is given to the teacher who then cuts each word out for "calling purposes." Proceed as in regular Bingo.

PARTS OF SPEECH BINGO

PREPOSITION	VERB	NOUN	ADVERB	PRONOUN	ADJECTIVE

SOURCE: Foreign Language . . . Game Plans for a Successful Season, OK: State Department of Education, 1981.

TITLE: Book Report

GRADE LEVEL: 5-6

CURRICULUM AREA(S): Reading

Design, draw and color a filmstrip. Use write-on film or recycled old filmstrips.

Create a mobile. Draw a character or scene to be used. Hang by fishing line froma hanger or short piece of doweling.

Design and make a puppet to go with a book. It may be one of the major characters of a story narrator. Use lunch bags for simple and inexpensive puppets.

SOURCE: Scoops of Ideas, OK: State Department of Education, 1980.

K
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TITLE: What Are the Many Places in My School?

GRADE LEVEL: K-3

CURRICULUM AREA(S): Art, Health, Language Arts, Social Studies

Take a buddy mini-trip to the principal's office. Look for the principal's name, special belongings (pictures, chair, briefcase), tools (pens, paper, books, telephone, intercom system), helpers (secretaries, student assistants, assistant principal). Ask the principal what he/she does for "our school." (Prepare word cards ahead of time for principals' name, tools, helpers.)

Write an experience story based on what the children recall from the trip. Write the words exactly as the children offer them. Have children match word cards to the words in the story. Ask children to draw or paint a picture of the principal in the office. Display pictures with the story on a bulletin board or in book form for the reading center. Use the story for phonics and word recognition lessons.

Take other mini-trips: cafeteria, kitchen, custodian's room, playground, gymnasium, traffic / safety patrol, an upper grade room, health room, boys' and girls' restrooms, teachers' lounge, parking lot, library, work room or other places in your school.

Make a map of the school building as it is explored. Provide an outline of the building with rooms drawn in on a large sheet of butcher paper. Work on a surface (floor or table) with the map placed in the appropriate directions. Color, print or use markers for articles and people in each room as exploration continues. Lead exercises in finding each place or each person visited on the map from time to time. Keep the map on a flat surface facing the appropriate directions.

Invite children to compose, write or draw a thank-you note to the person hosting each mini-trip. Encourage the child to compose the note instead of copying. If any copying is employed, give the child the note on a sheet of paper to copy from the desk instead of from the board to minimize difficulties in visual memory and eye-hand coordination.

SOURCE: Classroom Learning Activities for Social Studies (CLASS), OK: State Department of Education, 1982.

TITLE: Words With Either Upper or Lower-Case Letters at Beginning

GRADE LEVEL: 1

CURRICULUM AREA(S): Language Arts

Select five words the child has mastered in lower-case form. Include words beginning with letters such as "A, a; B, b; D, d; E, e; F, f; G, g; H, h; M, m; N, n; Q, q; R, r" where the changing form of the initial letter may cause confusion.

On index cards write the same five words using upper-case letters at the beginning. Make sandpaper letters, both upper and lower-case, for the initial letters of the words chosen. They should be close to the same size as the lettering on the word cards.

Give the child the five word cards beginning with lower-case letters and the five matching cards beginning with upper-case letters. Have the child take the cards and match them, saying the words aloud.

On the child's record sheet, mark those words which have been mastered. Later, check off other words as they are mastered.

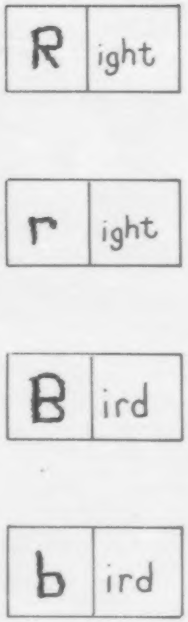
Give the child the lower-case and upper-case sandpaper letters for the initial letters of the words that need additional work.

Have him/her trace the letters with two fingers and identify both the lower-case and upper-case letters by name.

Give the child matching word cards. Place the sandpaper letters over the initial letters on the card. Have the child trace the initial letter as he/she pronounces each word.

After the child has practiced each word, collect all ten word cards, mix them together, and ask the child to match the lower-case and upper-case word forms and to read the words.

SOURCE: Used with permission from Teaching Reading Skills, Grade One. Copyright 1981. Zaner,-Bloser, Inc., Columbus, Ohio.

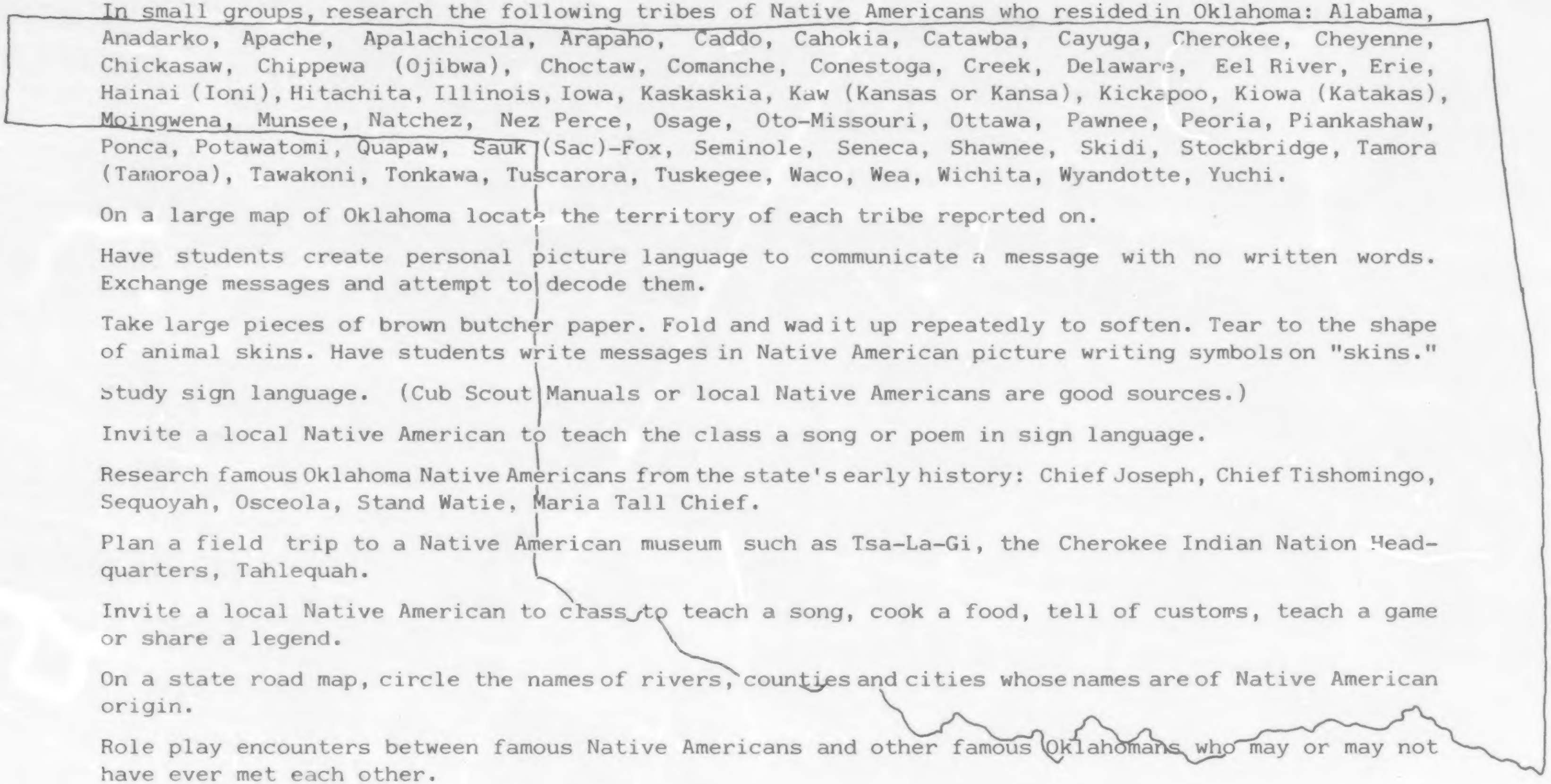


KTVA

TITLE: Which Native Americans Lived in Oklahoma?

GRADE LEVEL: 4-6

CURRICULUM AREA(S): Art, Music, Social Studies, Speech



In small groups, research the following tribes of Native Americans who resided in Oklahoma: Alabama, Anadarko, Apache, Apalachicola, Arapaho, Caddo, Cahokia, Catawba, Cayuga, Cherokee, Cheyenne, Chickasaw, Chippewa (Ojibwa), Choctaw, Comanche, Conestoga, Creek, Delaware, Eel River, Erie, Hainai (Ioni), Hitachita, Illinois, Iowa, Kaskaskia, Kaw (Kansas or Kansa), Kickapoo, Kiowa (Katakas), Moingwena, Munsee, Natchez, Nez Perce, Osage, Oto-Missouri, Ottawa, Pawnee, Peoria, Piankashaw, Ponca, Potawatomi, Quapaw, Sauk (Sac)-Fox, Seminole, Seneca, Shawnee, Skidi, Stockbridge, Tamora (Tamoroa), Tawakoni, Tonkawa, Tuscarora, Tuskegee, Waco, Wea, Wichita, Wyandotte, Yuchi.

On a large map of Oklahoma locate the territory of each tribe reported on.

Have students create personal picture language to communicate a message with no written words. Exchange messages and attempt to decode them.

Take large pieces of brown butcher paper. Fold and wad it up repeatedly to soften. Tear to the shape of animal skins. Have students write messages in Native American picture writing symbols on "skins."

Study sign language. (Cub Scout Manuals or local Native Americans are good sources.)

Invite a local Native American to teach the class a song or poem in sign language.

Research famous Oklahoma Native Americans from the state's early history: Chief Joseph, Chief Tishomingo, Sequoyah, Osceola, Stand Watie, Maria Tall Chief.

Plan a field trip to a Native American museum such as Tsa-La-Gi, the Cherokee Indian Nation Headquarters, Tahlequah.

Invite a local Native American to class to teach a song, cook a food, tell of customs, teach a game or share a legend.

On a state road map, circle the names of rivers, counties and cities whose names are of Native American origin.

Role play encounters between famous Native Americans and other famous Oklahomans who may or may not have ever met each other.

SOURCE: Miscellaneous Curriculum Materials, OK: State Department of Education.

TITLE: Follows Left-to-Right Progression

GRADE LEVEL: K-2

CURRICULUM AREA(S): Readiness

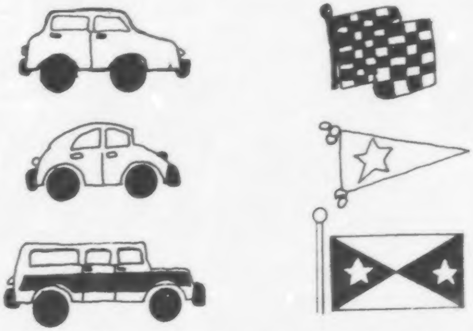
On the floor place six objects at least one foot apart in a straight line.

Starting with the first object on the left, have the child touch it, name it and move to the next object which he/she touches and names. He/she should continue moving down the line from left to right to the end. Ask him/her to do this three times.

Leave the first and last object but remove the four in between. Lay a piece of masking tape on the floor between the two objects.

Starting at the left, have the child walk on the tape. When he/she reaches the end, have him/her step off the line, circle back to the starting point and repeat the movement two more times.

On the left-hand side of the chalkboard draw three cars. Approximately three feet to the right draw three flags. Ask the child to draw a left-to-right line from the first car to the first flag. Have the child do the same for the second and third cars.



Have the child use the chalk eraser to trace the three lines from car to flag.

Practice the procedure often until the child automatically draws a line from left to right.

SOURCE: Used with permission from Teaching Reading Skills, Readiness Level. Copyright 1981, Zaner-Bloser, Inc., Columbus, Ohio.

K T V A

TITLE: Chain Gang Water Hauling Activity

Grade Level: 4-6

CURRICULUM AREA(S): Health, Science, Social Studies

MATERIALS: One gallon container per student (plastic milk carton can be used, cut off the top leaving about a 12 cm diameter opening); Three 50-gallon drums or equivalent storage vats; Pond, body of water, or water faucet, preferably out-of-doors

At body of water: fill up the 50-gallon drums, as fast as possible without getting wet! Depending on the individual teaching setting, the teacher may want to discuss methodology before going outside to do the actual task. Would everyone grab a bucket to get water and bring it back to the drum? Hopefully, one of the students will suggest the assembly line approach. If not, you may lead them into this idea. If the situation lends it, it may be a profitable experience to let the students haul water on their own, taking each bucket to the water source, filling it and then carrying it to the drums. Then have them repeat the activity using the chain gang and see how the time and effort compares. When the task is completed, ask the students how long they think this water would last if one person were to use it for drinking, bathing and anything else in their lives that required water? After discussion, tell the students the water would only last one day for one student.

SOURCE: Outdoor Education, Issues & Investigations, OK: State Department of Education, 1981.

K T V A

TITLE: Rhythm

GRADE LEVEL: 1-6

CURRICULUM AREA(S): Language Arts [can be adapted by changing letters to content vocabulary words or problems], Reading

Each person has a number or letter. Everyone in unison hits the desk with both hands (palms down), then claps once, then snaps fingers of the right hand, then snaps fingers of the left hand. Repeat continually. The speed can be varied. One student begins by saying his number or letter with the right snap and the number or letter of someone else on the left snap. That student then gives his/her number or letter and that of another person. When someone breaks the rhythm, the game starts over. The object is to keep going (which takes concentration).

SOURCE: Foreign Language . . . Game Plans for a Successful Season, OK: State Department of Education, 1981.

K T V A

TITLE: Arts in Basic Education [Citizenship]

GRADE LEVEL: 1-5

CURRICULUM AREA(S): Drama, Social Studies

An activity designed to aid in understanding the necessity for rules and order in both personal life and society as a whole.

Provide enough game boards or materials of an unfamiliar game for each student in the class. Pair or small group them, instruct them to play the game. No prior discussion of the rules should be allowed. As the game proceeds, a need for a standard set of rules should become apparent. At the point of deadlock, begin a discussion of the need and reason for rules, agree on them, list them on board. Have different sets of students demonstrate: proper way to play or what would happen if neither followed the rules. Encourage the discussion of feelings when rules are not observed. Role play other situations where rules are broken (e.g., street scene with pedestrians, vehicles, signs, police officer).

SOURCE: Connections: Linking the Arts and the Basic Curriculum, Oklahoma State Department of Education, 1980.

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K T V A

TITLE: Wildlife

GRADE LEVEL: 4

CURRICULUM AREA(S): Science

1. The child will be able to differentiate the classes of wildlife (mammal, reptile, amphibian).
2. The child will be able to list the feeding habits of at least three animals.
3. The child will be able to classify animals according to the habitat in which they are normally found.

This activity involves the use of the tape recorder. Let the children choose a short story from a book or magazine, then read and tape the story. Two choices should be provided for an activity.

Do further research and write a report on the animal they chose to read about in the encyclopedia, including its eating habits, its class and natural habitat.

Draw and color a picture of the animal(s) they read about - drawing it in its natural habitat. Both reports and pictures can then be displayed on the bulletin board.

To motivate the students, have wildlife posters hanging around the room, a bulletin board displaying their work, and an interest center having a small animal for them to observe and learn to care for.

SOURCE: Sandra Shawver, Phillips University, Enid, Oklahoma.

168

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TITLE: Understanding Foods

GRADE LEVEL: 4-6

CURRICULUM AREA(S): Economics, Home Economics

Organize the class into small committees and have them do comparison shopping on ten items in at least three stores. Compare and discuss the results.

Plan and organize a field trip to the following types of stores: discount, variety, department and specialty. Debrief after the field trip.

Ask a resource person from a chain store to discuss different kinds of retail outlets.

Invite a consumer cooperative representative to explain the operation of co-ops.

Invite a home economist or county extension specialist to discuss good food items.

Compare newspaper advertisements for standard food items.

Have students compare store brands and generic brands that sometimes represent good values at a lower price than nationally advertised brands.

Give four groups a list of 10 food items to check prices at one of the following: supermarket, convenience store, specialty store and cooperative. Emphasize differences in services, charges and deliveries in class discussion afterwards.

Have students form small committees and plan a week's menu for a family of four, using a food budget of $100. Ask a home economics teacher to select the best menus and explain why. If possible, let the students shop and make comparison price checking.

Invite a dietition to explain good nutrition.

Have students consider factors such as price, quality, convenience, time, energy and location in making food buying decisions.

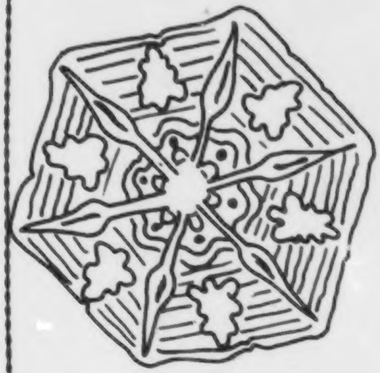
Explain to students what to look for in government inspection stamps, how to read labels and code dating, and how to understand the meaning of grades and packaging.

Have students bring three labels from different brands of the same product. Compare contents, weight, price, etc.

Let the class judge a collage of labels and packaging that the students have made.

Have students compare cost per unit of measure for various forms of food: fresh, frozen, canned or dehydrated.

SOURCE: Consumer Education, K-12, OK: State Department of Education, 1981.



K, T

Activities

LEARNING ACTIVITIES FOR THE TACTUAL LEARNER

Many students do not do well in school because the specific instructional method used to teach them does not complement their individual learning style. Extensive research verifies that not all students learn best through their visual and auditory senses; such students are usually highly tactual and tend to both gain and retain information when they become involved with the actual use of hands-on materials.

Selected examples of resources that respond to a student's need for tactual involvement in the learning process are called learning circles, task cards and innovative electroboards. These game-like resources are naturally motivating, and, because they are also self-corrective, a student who has difficulty using them nevertheless is able to successfully identify the correct answers through inductive or deductive learning.

Directions for the construction of learning circles, task cards, and innovative electroboards are shown respectively in Figures 2, 3, and 4. The students themselves can be encouraged to produce these materials once samples are available to them. By the time they are in the second or third grade, they can be motivated to seek the information on their own for the needed content. Students should be further encouraged to translate that information to all or any of the three tactual resources using the "Basic Tools and Materials" pictured in Figure 1.

Although secondary science and mathematics examples are featured in all the figures, the three self-corrective resources can easily complement both elementary and secondary curricula by simply varying the difficulty of selected content.

Generally, the highest percentage of our elementary students are tactual. When these youngsters manipulate hands-on materials, they tend to remember more of the required information than when they use any other sense.

Because tactual resources are naturally responsive to students' tactual senses, and because they are different from general class discussions or the lecture method, learning circles, task cards and innovative electroboards will be appreciated and used. More important, students will learn from them!

SOURCE: Bruno, Angela. "Learning Activities for the Tactual Learner," Student Learning Styles and Brain Behavior, (Selected paper from the National Conference, Fall 1981, sponsored by the Learning Styles Network in New Orleans. Published by NASSP), pp. 25, 26, 27.

Figure 1

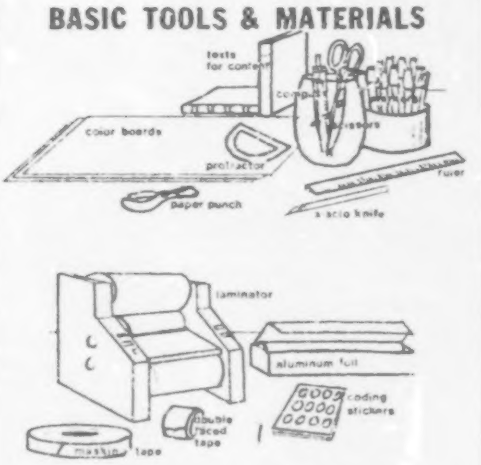
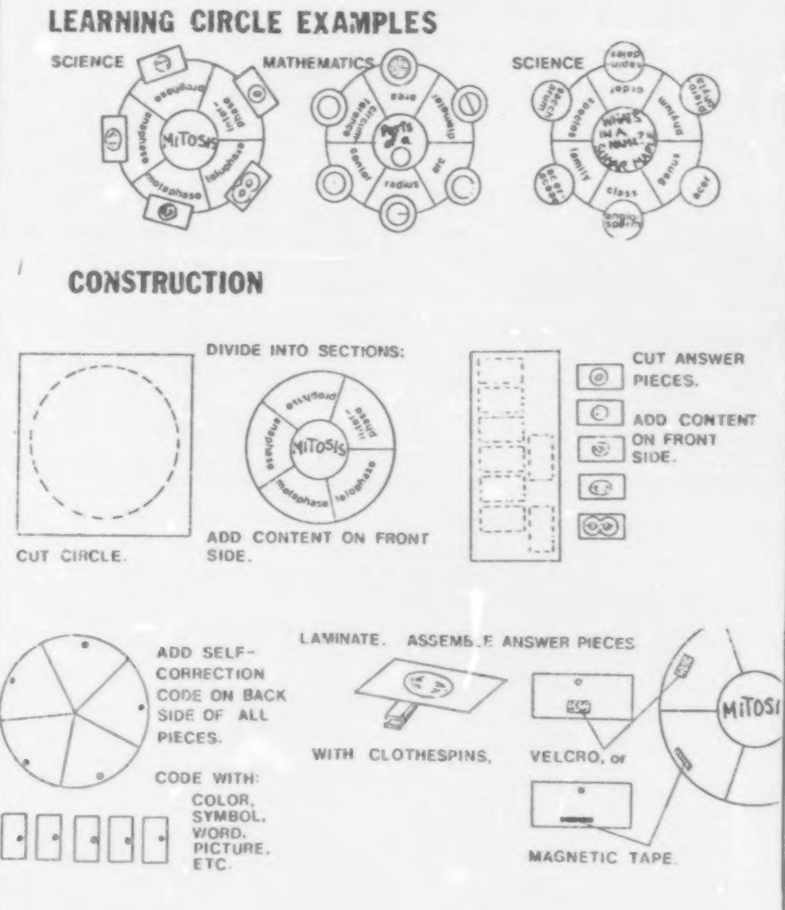
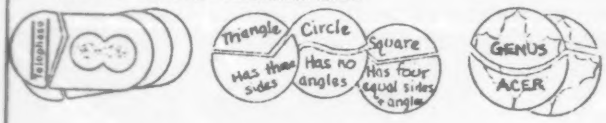

BASIC TOOLS & MATERIALS
texts for content
compass
scissors
color boards
protractor
ruler
paper punch
x-acto knife
laminator
aluminum foil
coding stickers
double faced tape
masking tape

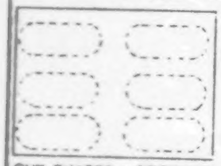
Figure 2


LEARNING CIRCLE EXAMPLES
SCIENCE
MITOSIS
prophase
inter-phase
telophase
metaphase
anaphase
MATHEMATICS
Parts of a
area
diameter
arc
radius
center
circumference
SCIENCE
WHAT'S IN A NAME? SUGAR MAPLE
order
phylum
genus
class
family
species
kingdom
acer
sapindales
angiosperm
acer-aceae
CONSTRUCTION
CUT CIRCLE.
DIVIDE INTO SECTIONS:
ADD CONTENT ON FRONT SIDE.
CUT ANSWER PIECES.
ADD CONTENT ON FRONT SIDE.
ADD SELF-CORRECTION CODE ON BACK SIDE OF ALL PIECES.
CODE WITH:
COLOR,
SYMBOL,
WORD,
PICTURE,
ETC.
LAMINATE.
ASSEMBLE ANSWER PIECES
WITH CLOTHESPINS,
VELCRO, or
MAGNETIC TAPE.
MITOSI

TASK CARD EXAMPLES

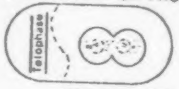

Telophase
Triangle
Has three sides
Circle
Has no angles
Square
Has four equal sides & angles
GENUS
ACER

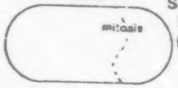
CONSTRUCTION



CUT SHAPES or RECTANGLES.

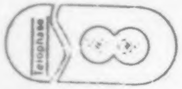
ADD CONTENT ON FRONT SIDE:



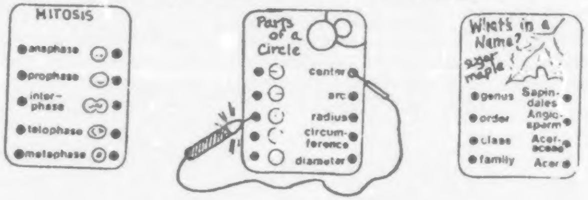


SELF-CORRECTION CODE ON BACK SIDE.

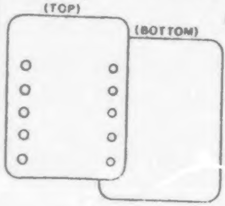
LAMINATE.
CUT CARD APART.



INNOVATIVE ELECTROBOARD EXAMPLES

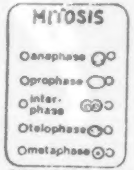

MITOSIS
anaphase
prophase
inter-phase
telophase
metaphase
Parts of a Circle
center
arc
radius
circum-ference
diameter
What's in a Name?
sugar maple
genus
order
class
family
Sapin-dales
Angio-sperm
Acer-aceae
Acer

CONSTRUCTION



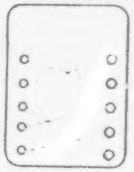
CUT 2 PANELS.

PUNCH HOLES IN TOP PANEL.


MITOSIS
anaphase
prophase
inter-phase
telophase
metaphase

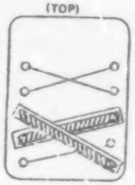
ADD CONTENT ON TOP PANEL.

ON BACK OF TOP PANEL

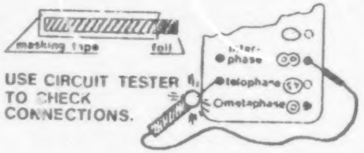


DRAW LINE BETWEEN MATCHING HOLES.

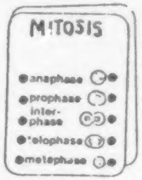
LAMINATE & TRIM FILM FROM HOLES



MAKE CIRCUIT ON BACK OF PANEL


masking tape
foil
inter-phase
telophase
metaphase

USE CIRCUIT TESTER TO CHECK CONNECTIONS.


MITOSIS
anaphase
prophase
inter-phase
telophase
metaphase

ASSEMBLE TOP AND BOTTOM PANELS WITH DOUBLE FACED TAPE.

T-K

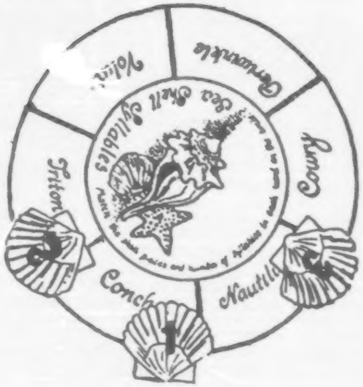
TITLE: Learning Circles

GRADE LEVEL: 1-6

CURRICULUM AREA(S): All

"Learning circles consist of two basic parts. The 'circle,' divided into sections (number of sections vary according to content), contains information to be matched to the 'answer pieces', which are attached to the circle in one of several ways.

1. Cut a circle (or creatively vary the shape) from oaktag or cardboard. Use a ruler to divide the circle into sections. The number of sections will vary with the amount of information to be included in each section and the level of difficulty desired.
2. Boldly print or depict questions or information in each section on the front of the circle.
3. Construct answer pieces by writing answers or corresponding information on pieces of oaktag or posterboard.
4. Correctly match all answer pieces to the corresponding points on the circle. Make materials self-corrective by color, picture, symbol or number coding the back of each answer piece and the back of the circle.
5. Laminate circle and answer pieces.
6. Make answer pieces attach to the circle by using double-faced tape to secure answer pieces to clip-style clothes pins, or by using small pieces of Velcro or magnetic tape on both the backs of the answer pieces and the front of the circle."



SOURCE: Angela Bruno, "Hands-on Activities for Students Writing: Innovative Learning Style Resources," Early Years, (October 1982), P. 62.

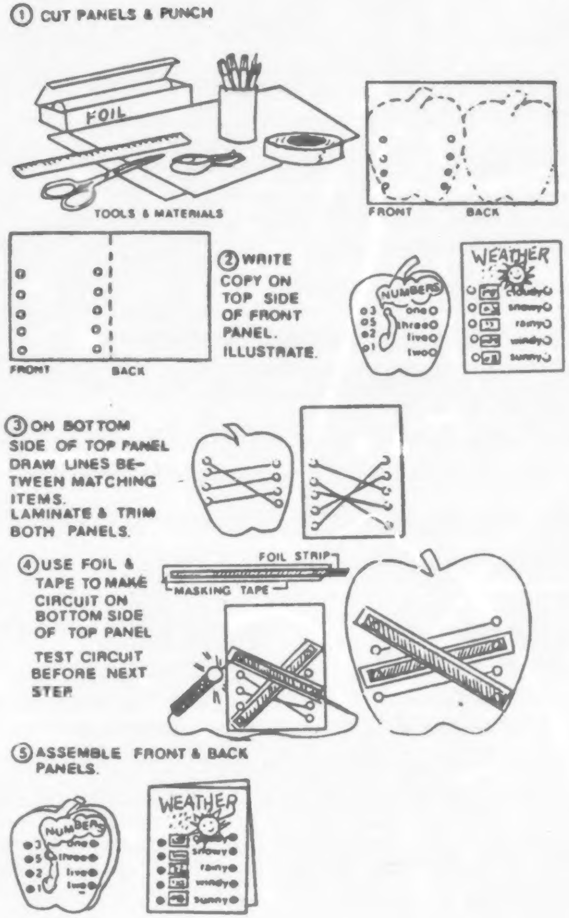
TITLE: Electroboards

GRADE LEVEL: 1-6

CURRICULUM AREA(S): All

Electroboards are resources in which information on the right and left sides of the "board" are matched using wires from a "circuit completing mechanism." An ordinary circuit tester, available at most hardware and electrical supply stores can be used.

1. Cut two pieces of oaktag of the same size. Use a paper punch to make evenly-spaced holes along each side of "one" of the pieces of oaktag.
2. Next to each hole on the "left" side of the piece of oaktag, boldly print or depict one question or portion of information. Randomly print the answers to the questions or the corresponding information next to the holes along the "right" side of the oaktag.
3. On the back of the oaktag containing the holes and the information to be matched, create circuits made with aluminum foil strips and masking tape. Lay strips of foil between corresponding correct questions and answers. Cover each foil strip with masking tape ("wider than the foil strip), making sure both the foil and the tape "completely cover" the punched holes. Check each circuit by matching correct answers on the front of the card using a circuit tester.
4. Conceal the circuits from view by taping the second piece of oaktag to the back of the first. Tape the entire perimeter of both cards, or connect the two pieces using double-faced tape.


① CUT PANELS & PUNCH
FOIL
TOOLS & MATERIALS
FRONT
BACK
FRONT
BACK
② WRITE COPY ON TOP SIDE OF FRONT PANEL. ILLUSTRATE.
NUMBERS
3 one
5 three
2 five
1 two
WEATHER
cloudy
snowy
rainy
windy
sunny
③ ON BOTTOM SIDE OF TOP PANEL DRAW LINES BETWEEN MATCHING ITEMS. LAMINATE & TRIM BOTH PANELS.
④ USE FOIL & TAPE TO MAKE CIRCUIT ON BOTTOM SIDE OF TOP PANEL
FOIL STRIP
MASKING TAPE
TEST CIRCUIT BEFORE NEXT STEP
⑤ ASSEMBLE FRONT & BACK PANELS.
NUMBERS
3 one
5 three
2 five
1 two
WEATHER
cloudy
snowy
rainy
windy
sunny

SOURCE: Angela Bruno, "Hands-on Activities for Students Writing: Innovative Learning Style Resources," *Early Years*, (October 1982), p. 62, 66.

TITLE: Activities That Appeal to Learning Strengths

GRADE LEVEL: K-6

CURRICULUM AREA(S): All

1. Make crossword puzzles with spelling words.
2. Write sentences on the board with capital letters, punctuation and spelling errors; let student correct.
3. Play "Hangman" with spelling words or foreign language words.
4. Write spelling words in glue; sprinkle glitter over them.
5. Make mobiles with science vocabulary; pictures of clouds, raindrops, rainbows, snowflakes, etc. Use this also for math terms.
6. Make a domino game with matching pictures for sounds.
7. Build a birdhouse after reading instructions.
8. Use letters cut from headlines to write spelling words.
9. Draw picture shapes for vocabulary in math, careers, science and make collage.
10. Use task cards.
11. Use electroboards.
12. Utilize on-site visits.
13. Use a number line on the floor; step off addition and subtraction problems.
14. Make relief maps of playdough.
15. Use the "invisible man" to teach health systems or skeletal system.
16. Use cereal or spaghetti letters to write spelling words.
17. In music use rhythm instruments.
18. In music use a drum to beat various rhythms; have child walk to rhythm.
19. Give children several lengths of string or yarn; have them use to write spelling or vocabulary words.
20. Allow this child to point when reading.
21. Use an abacus, cuisinaire rods or chisanbop to teach math.
22. Use real or play money to teach this concept in math.
23. Encourage kindergarten learners to imagine themselves manipulating or working through math problems.

SOURCE: Carol Ashmore, Kirkland Elementary School, Putnam City Public Schools.

TITLE: Body Awareness

GRADE LEVEL: K-3

CURRICULUM AREA(S): Health, P.E.

The teacher touches the different parts of the body and says, "This is my head; touch your head."

Continue, using all body parts.

Teacher instructs children to touch body parts on command.

Example: "Place both hands on your head." Continue using all body parts.

Have each child identify specific body parts by "Show me your _____. Example: "Show me your shoulders." "Show me your knees."

Children touch body parts with other body parts. Example:

Nose to knee
Wrist to ear
Elbow to stomach
Chin to chest
Elbow to leg
Wrist to neck
Ear to shoulder
Chin to wrist
Foot to leg
Hands to hips
Wrist to ankle
Hands to back
Elbows to knees
Fingers to shoulders
Toes to toes
Toes to nose
Wrist to back
Heel to heel

The following activity can be done using a hoop on the floor, one sheet of newspaper opened on the floor, or a single jump rope laid in a circle on the floor.

Have each student place one body part, such as a hand, in the circle or on the newspaper. Build to a sequence of body parts until the whole body is in the circle or on the newspaper.

Utilize the circle or newspaper for moving around, over, across, in and out, under, in front of, behind, through, forward, backward, sidewards, fast, slow, etc. Example: How many different ways can you move across the circle?

Show me how many different ways you can move your (shoulders).

Be sure and use all body parts listed above (chin, head, elbows, etc.).

Have each student freeze in a pose that emphasizes a different body part each time he/she freezes.

SOURCE: A Lifetime Experience. . .Physical Education, K-12, OK: State Department of Education, 1981.

TITLE: Body Actions

GRADE LEVEL: K-6

CURRICULUM AREA(S): P.E.

This factor actually involves learning what movements or skills the body is capable of.

There are movements that can be done in a fixed location; the body may move as a whole, or various parts may move independently or together. These are the nonlocomotor skills of twisting, turning, stretching, swinging, bending, shaking, bounding, pushing, pulling and combinations of these. The body can also move through space, utilizing the locomotor skills of walking, running, jumping, hopping, leaping and various combinations of these.

BODY ACTIONS

Nonlocomotor Skills

Twist
Turn
Stretch
Swing
Push
Fall
Bend
Lift
Pull

Various Combinations

Locomotor Skills

Walk
Jump
Slide
Leap
Run
Hop
Skip
Gallop

Various Combinations

Children should realize that any part of the body may initiate the movement into space. The weight of the body may be born by different parts of the body with locomotor movements developed from many positions (walking on the hands, hanging by the hands).

SOURCE: *A Lifetime Experience . . . Physical Education, K-12*, OK: State Department of Education, 1981.

T-K

TITLE: Handwriting

GRADE LEVEL: K-6

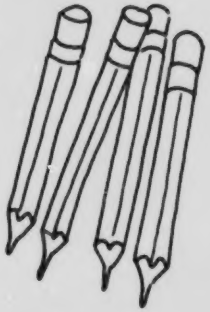
CURRICULUM AREA(S): Handwriting

The kinesthetic learner is potentially the best handwriter in the class. Most often, however, the child with a dominant kinesthetic modality excels neither in handwriting nor in other subject areas. There are several reasons for this failure to excel:

1. Kinesthetic learners are reinforced differently from other learners. Auditory and visual learners find that their good academic performances, in handwriting or other areas, are praised or rewarded. Kinesthetic learners are reinforced for sitting still or simply staying out of trouble.

2. Kinesthetic learners are not expected to perform well. They have acquired the reputation of poor learners, and are not held to the same standards as are other students. Not surprisingly, Kinesthetic learners "live down" to teacher expectations.

3. Kinesthetic learners are expected to progress to small writing at the same time as do visual and auditory learners. At the chalkboard, or using blank paper or primary ruled paper, the kinesthetic learner does well. If this child is forced at too early a stage to change to adult size writing, or from manuscript to cursive, frustration and failure may result. Auditory learners like loud and clear sounds; visual learners like bright bold displays; and kinesthetic learners like large-muscle activity. Taking away this large muscle at too early a stage is the equivalent of mumbling for the auditory learner.



SOURCE: Brochure #10, "Teaching Handwriting Through Modality Strengths," Copyright © 1980 by Zaner-Bloser, Inc., Columbus, Ohio. Reprinted by permission.

TITLE: Finger Multiplication

GRADE LEVEL: 3-6

CURRICULUM AREA(S): Math

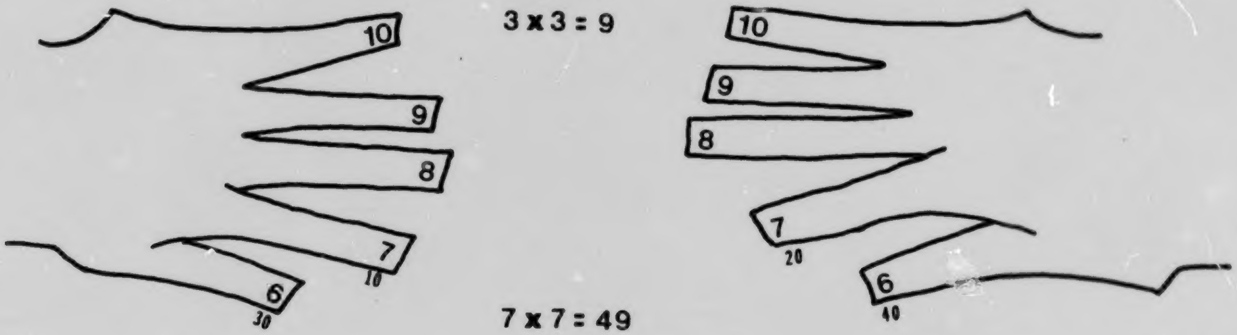
Finger Multiplication is a technique for use by a student who knows the ones through fives in multiplication but has problems with the sixes through the nines. It is a compensatory technique - one used to by-pass a problem area.

This technique is very concrete. Have the student hold hands up palms out. Number fingers starting with the thumb as six, index finger as seven and so on to ten. Do this on both hands. Each finger now has an assigned number.

To multiply six times eight, the student places the appropriate fingers of one hand to the appropriate fingers of the other hand forming a bridge, i.e., the thumb (6) of one hand to the middle finger (8) of the other hand. The fingers below and including the bridge are tens. The ones above the bridge are ones.

Now count all fingers below the bridge and the two making the bridge as tens (i.e., 10,20,30,40) then multiply the ones on one hand times (fingers above the bridge) the ones on the other hand (i.e., 2 x 4 = 8). Now simply add the two together to get your answer. Six times eight equals forty plus eight.

In actual practice, the student would keep his/her hands on his/her desk or lap. (NOTE: Keep thumbs toward tummy.) This technique is not recommended for elementary children. Learning disabled students at the secondary level have had very little trouble in learning this technique.



SOURCE: Exceptions, Child Service Demonstration Center, Cushing, Oklahoma.

TITLE: Teacher Suggestions

GRADE LEVEL: K-6

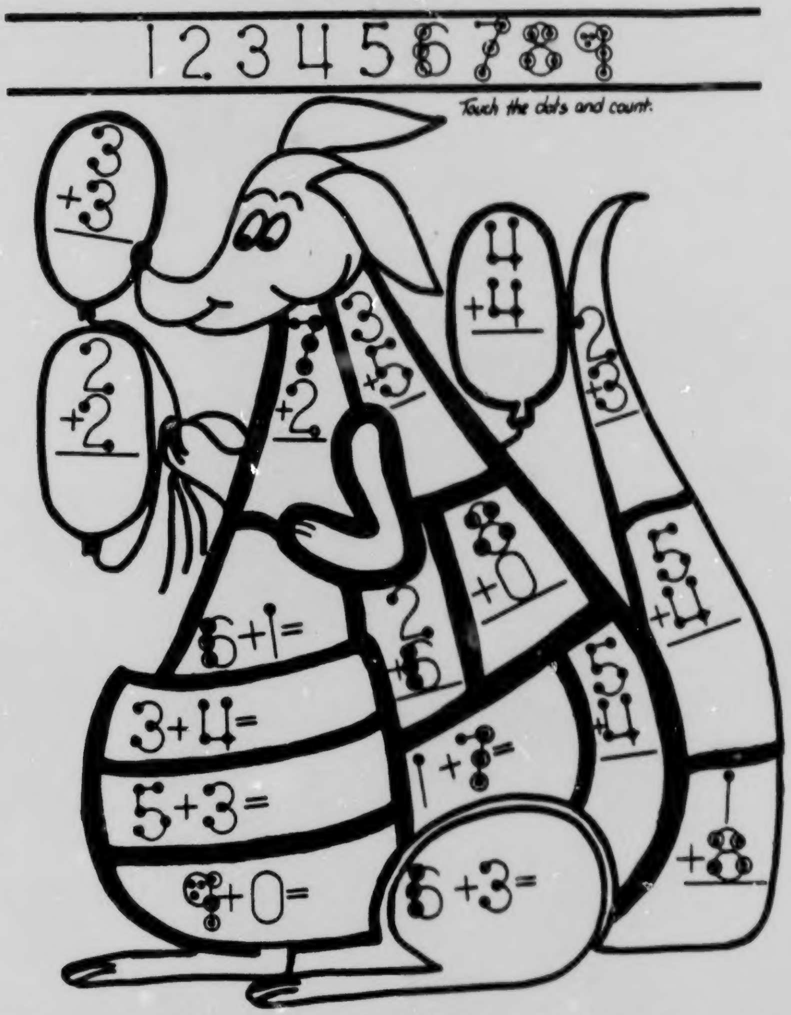
CURRICULUM AREA(S): All

If the student primarily learns by moving or touching, adjust the mode of presentation by:

1. Using classroom demonstrations when possible.
2. Building models (perhaps instead of writing reports).
3. Using role play or simulations (especially in social science courses).
4. Teaching the student to take notes.
5. Allowing the student to draw, doodle, etc., while he/she is listening.
6. Allowing the student to move about (within reason) during class or while working.
7. Using timelines for historical dates.
8. Using manipulable objects, especially in math, and especially when teaching abstract concepts such as fractional parts, measurement and geometry.
9. Allowing alternatives to written reports such as drawings, filmstrips, dramatizations, performing experiments, displays, etc.

SOURCE: Exceptions, Child Service Demonstration Center, Cushing, Oklahoma

K, T, V
Activities


1 2 3 4 5 6 7 8 9
Touch the dots and count.
3 +3
2 +2
7 +2
3 +5
4 +4
2 +3
8 +0
5 +4
6+1=
2 +6
5 +4
3+4=
1+7=
5+3=
1 +8
9+0=
6+3=

TITLE: Adding by Touch Math

GRADE LEVEL: 1-3

CURRICULUM AREA(S): Math

This activity is designed for two purposes:

1. It will help you teach the children the "touch points" on each number.
2. It will help teach beginning addition by having the children touch each "touch point" and count.

SOURCE: Touch Math, Box 7402, Colorado Springs, Colorado 80933, (303) 599-3381, 1981. [All Touch Math materials are available for use only by persons having attended a Touch Math Inservice by certified Touch Math Instructors.]

TITLE: General Etiquette

GRADE LEVEL: K-6

CURRICULUM AREA(S): Health, Home Economics, Language Arts

Manners are based on customs, consideration and common sens. Cut out the rectangles at the bottom of the page. Glue each one under the most appropriate heading.

CUSTOM	**CONSIDERATION**	**COMMON SENSE**

Shaking Hands	Keeping Clean	Sharing Work
Introducing People	Tipping A Hat	Asking To Be Excused At The Table
Introducing Yourself On the Phone	Eating With Mouth Closed	Brushing Your Teeth
Setting The Table Correctly	Standing For Older People	Saying "Please and Thank You"

SOURCE: Kids and Manners, A Ticket to Success, OK: State Department of Education, 1981.

TITLE: Great Vowel Fly-In

GRADE LEVEL: 1-3

CURRICULUM AREA(S): Language Arts, Math, Reading, Science

Cut out airplanes and place simple words or pictures with a vowel sound on each airplane.

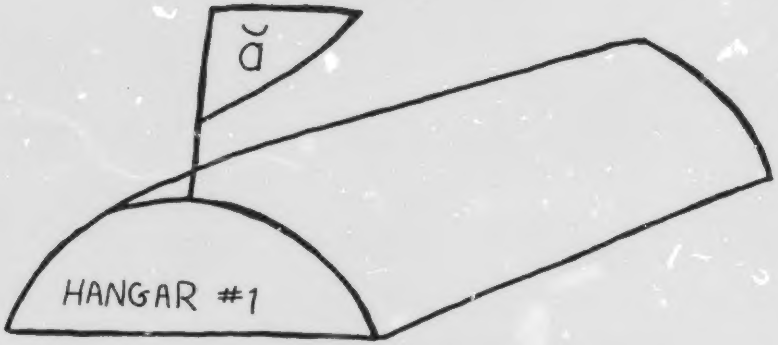
Example: băt bĭt pĕn cŏt
cŭt bāke bīke mē
sō ūniform

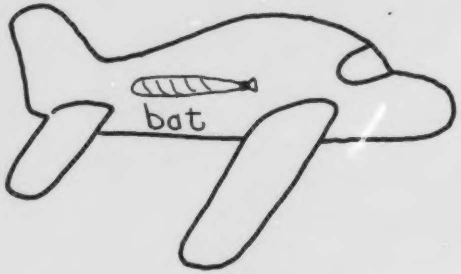
Children place the airplane in the proper hangar that air sock indicates.

Examples: ă ĕ ĭ ŏ ŭ or
ā ē ī ō ū

The correct vowel can be placed on the back of the airplane, so that the activity is self-correcting.

SOURCE: Scoops of Ideas, OK: State Department of Education, 1981.



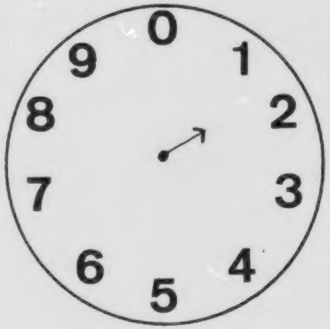


TITLE: Read A Numeral To 1,000,000

GRADE LEVEL: 4-6

CURRICULUM AREA(S): Math

Use a spinner with numerals 0, 1, 2, . . ., 9 as illustrated. Have student spin it six times to get six numerals. Student then should arrange numerals to produce (a) largest number, (b) smallest number, (c) many combinations in between. Student reads number aloud to teacher or partner.



SOURCE: A Product of Our Times, Mathematics Resource Book, K-8, OK: State Department of Education, 1981.

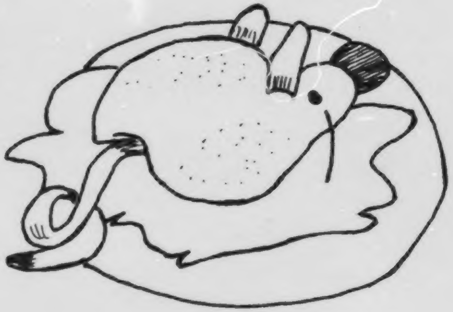
TITLE: What Children Can Do At Home

GRADE LEVEL: 1-6

CURRICULUM AREA(S): Art, Health, Math

Pear Mice Salad

1. Place a crisp lettuce leaf on a plate.
2. Put a chilled, canned pear half cut side down on lettuce leaf.
3. Add a maraschino cherry at small end for a nose.
4. Place two raisins near it for eyes.
5. Insert sliced almonds for ears.
6. Use a long carrot curl for tail.



Candle Salad

1. Place a crisp leaf of lettuce on a plate.
2. Put a pineapple ring in the center.
3. Stand 1/2 of a peeled banana in the center of the pineapple.
4. Insert a maraschino cherry placed on a toothpick into top of banana.

Celery Cart

1. Cut a celery stalk in half.
2. Fill with peanut butter, cottage cheese, plain cream cheese, a cream cheese mixture, egg salad or tuna fish salad.
3. Attach carrot slice "wheels" to cart with toothpicks.

Cream Cheese-Pineapple Stuffing

1 8-oz. pkg. cream cheese, softened

1 can crushed pineapple, drained

Mix softened cream cheese with drained crushed pineapple.

SOURCE: Oklahoma Nutrition Education Training, Oklahoma State Department of Education.

TITLE: May Math

GRADE LEVEL: 2-3

CURRICULUM AREA(S): Math

Cut out the centers of the flowers. Glue them on construction paper. Then cut out the petals. Glue them around the center of the flower that has the correct answer on it.

12	**15**	**18**	**24**

6 x 4	15 - 3	20 - 5	12 + 12	18 x 1	14 + 4	15 x 1
8 x 3	6 x 2	9 + 6	10 + 5	10 + 2	19 + 5	24 + 2
7 + 5	21 + 3	9 + 9	4 x 6	9 x 2	17 - 2	2 x 9
3 x 4	6 x 3	3 x 5	4 x 3	27 - 3	15 + 3	7 + 8

SOURCE: Celebrate Learning . . . Holidays in the Classroom, K-6, OK: State Department of Education, 1982.

TITLE: Skin Investigation

GRADE LEVEL: 4-5

CURRICULUM AREA(S): Health, Science

For this activity you will need water, a drinking glass and a thermometer.

How does sweat control body temperature?

Pour water into a drinking glass. Use a thermometer to make sure that the water is room temperature.

Take the thermometer carefully from the water. Leave a drop of water on the bulb of the thermometer. Look at the thermometer. Record the temperature. Gently blow on the drop of water. Record the temperature of this.

Place a drop of water on your skin. Note what happens. Now blow on the drop.

Questions:

1. What happened to the liquid in the thermometer when you had a drop of water on the bulb?
2. What happened when you blew on the drop of water?
3. How did your skin feel when you placed a drop of water on it?
4. What happened when you blew on the water?
5. How can you compare the way water acted in this investigation with the way sweat acts on your skin?

SOURCE: Jan Hill, Phillips University, Enid, Oklahoma.

TITLE: Writing Equations

GRADE LEVEL: 1-6

CURRICULUM AREA(S): Math

Prepare groups of things to be added (cups, bottle caps, books, small dolls) at different tables. Every child should stop at each table and perform the addition as directed. Provide each child with a worksheet on which a picture of each addition can be shown with space for the child to write the equation that goes with the drawing.

Note: Similar situations should be set up for subtraction.

Make felt figures of dresses, cars, etc. and create flannel board addition or subtraction situations for which the child must write an equation . . . including answer.

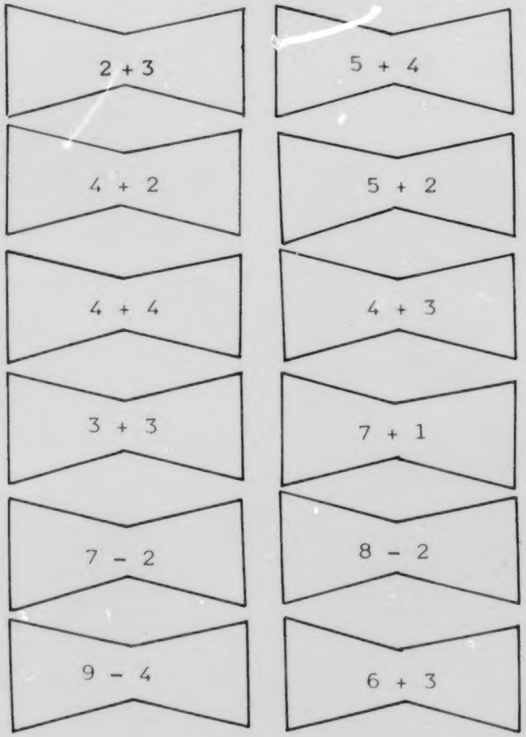
SOURCE: A Product of Our Times, Mathematics Resource Book, K-8, OK: State Department of Education, 1981.

TITLE: High Flying Math

GRADE LEVEL: 1-2

CURRICULUM AREA(S): Math

Cut out each bow and glue it to the correct kite.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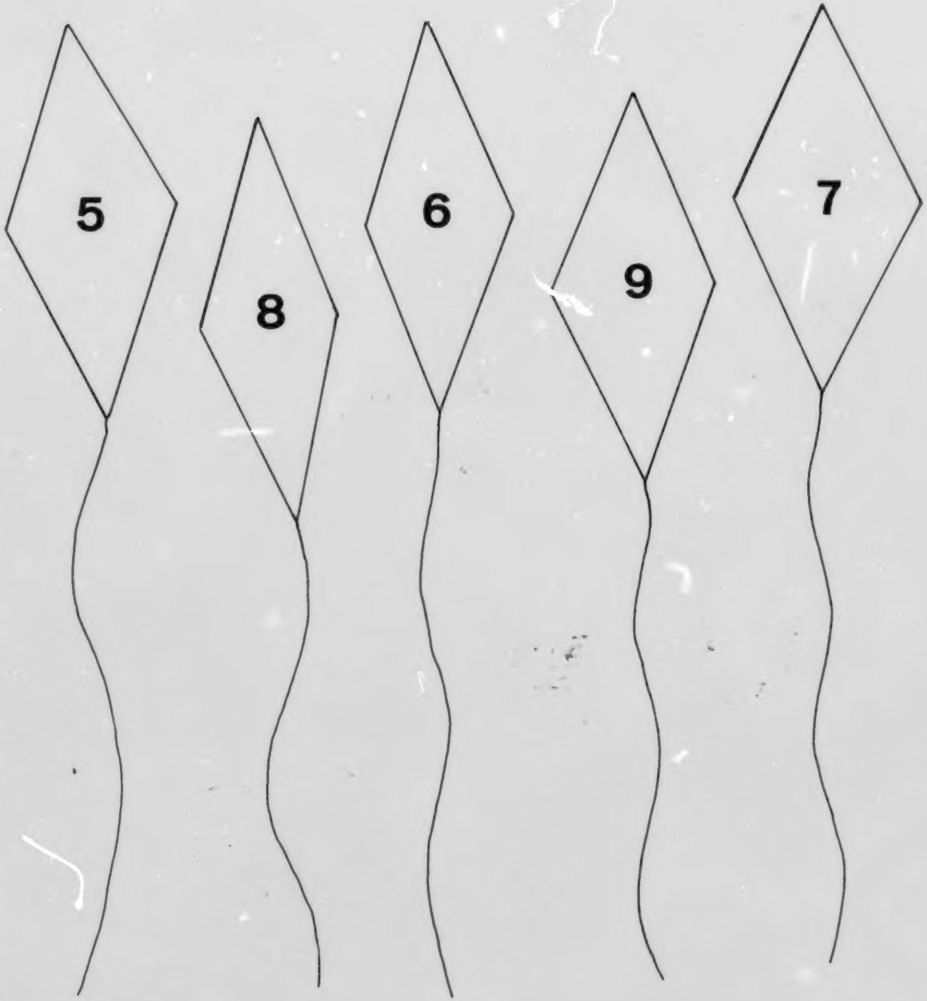
3 + 3
7 + 1
7 - 2
8 - 2
9 - 4
6 + 3



SOURCE: Celebrate Learning. . .Holidays in the Classroom, K-6, OK: State Department of Education, 1982.

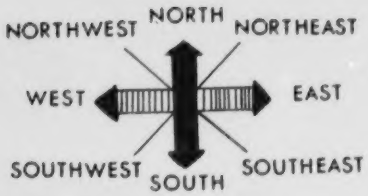
TITLE: Metric Ruler Pictures

GRADE LEVEL: 4-6

CURRICULUM AREA(S): Math

Use a metric ruler to measure. Follow directions.

1. Start at A and draw a line 2 centimeters north.
2. Start at B and draw a line 1 centimeter east.
3. Start at B and draw a line northeast to point I.
4. Start at C and draw a line southeast to point D.
5. Start at D and draw a line 11 centimeters west.
6. Start at E and draw a line southwest to point A.
7. Start at E and draw a line southeast to point J.
8. Start at F and draw a line 4 centimeters south.
9. Start at G and draw a line 10 centimeters east.
10. Start at H and draw a line 1½ centimeters north.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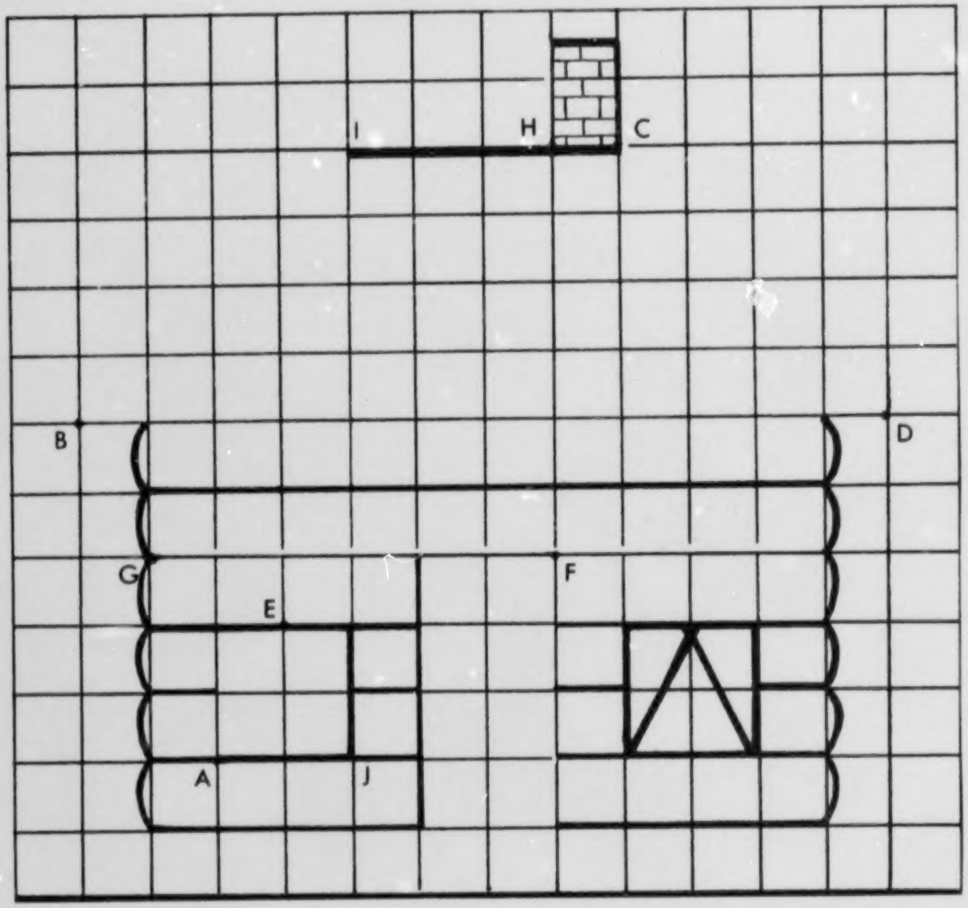
I
H
C
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D
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F
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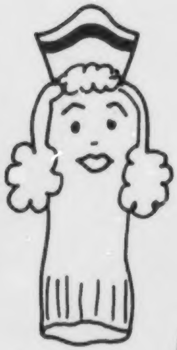
A
J

SOURCE: Celebrate Learning. . . Holidays in the Classroom, K-6, OK: State Department of Education, 1982.

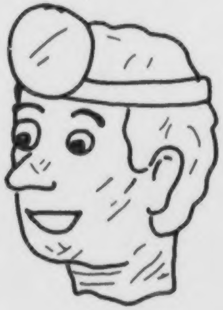
TITLE: Creative Drama

GRADE LEVEL: 5-6

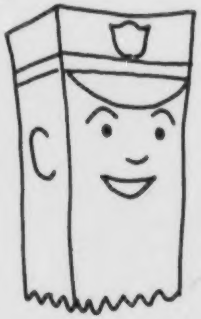
CURRICULUM AREA(S): Drama,
Language Arts, Speech



1. Puppetry. Ask students to create hand puppets of favorite television characters from such materials as old socks, paper bags, or papier maché. They can act out original dramas, perhaps on a stage made from a large cardboard box. They may want to write a theme song for the program or develop recorded music and sound effects to go with it.



2. Body language. Discuss how we convey moods and feelings simply by the way we hold our bodies, distance ourselves from others, use facial expressions and gestures. Select several television characters, e.g., Hawkeye, Popeye, Coolidge, Flo. Ask several students or the class as a whole to assume the posture of the characters, one at a time. Students should study each other to compare their postures and walks. Then, students might assume the body language of another character and again compare their portrayals. What does body language indicate about an individual?



SOURCE: Brochure from CBS, "Take A Lesson From T.V." Copyright © by Prime Time School Television.

K T V

TITLE: Constructing a Contour Map

GRADE LEVEL: 6

CURRICULUM AREA(S): Science, Social Studies

A simple model of a mountain can easily be made by fashioning a thin layer of plasticine modeling clay over a supporting wad of newspaper. A more permanent model can be made by using plaster-of-paris instead of plasticine. The model should be made to fit within the limits of a plastic dish pan.

With a felt tipped marker or the black grease pencil, mark a depth scale (2 cm intervals) on the inside wall of the dish pan.

Put the model in the pan and add water to a depth of 2 cm. (It may be necessary to color the water so that you can see it better).

Place the sheet of Plexiglass over the top of the dish pan and carefully trace the "shoreline" where the water contacts the mountain.

Remove the Plexiglass and add another 2 cm of water.

Repeat Step 4. Continue this procedure until the mountain has been covered by water and your contour map of the mountain is complete.

K T V

TITLE: Puppets

GRADE LEVEL: 1-6

CURRICULUM AREA(S): All

Cut hole in one end of shoe box. Lightly stuff one sack with newspaper to form head. Twist top of sack to form neck. Cut and paste features on face; lay aside.

Cut two bags on long seams to form two arms and legs. Bottom of sack forms hands and feet. Fold to form elbows and knees.

Tape/staple arms and legs to box.

Insert head into hole on end of shoe box.

Dress puppets as desired - hats, hair, canes, etc. Manipulate puppet from open back of shoe box.

Reluctant readers enjoy pretending the puppet is doing oral reading. Groups make up plays for puppets.

SOURCE: A Wide Spectrum of Ideas, OK: State Department of Education, 1981.

TITLE: History Hang-Ups

GRADE LEVEL: 4-6

CURRICULUM AREA(S): Art, Language Arts, Math, Music, Social Studies

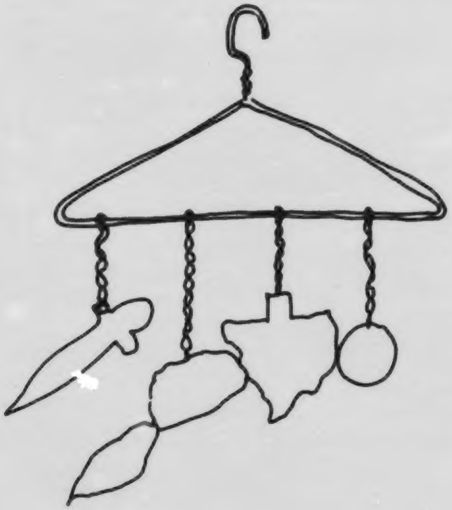
For this activity you will need coat hangers, construction paper, white paper and yarn. Have students work in small groups to create mobiles depicting the life of a historical figure or an important sequence of events. Groups should choose five key items to display.

For example, items for a biography of Jim Bowie could include the following:

1. Bowie knife
2. Louisiana (birthplace)
3. Alamo (Place of heroic death)
4. Cannon (fought in war)
5. Texas (where he fought)

Allow two or three class periods for this activity.

SOURCE: Classroom Learning Activities for Social Studies (CLASS), OK: State Department of Education, 1982.



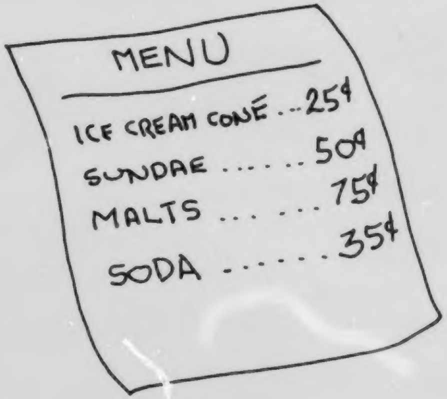
TITLE: Ice Cream Money

GRADE LEVEL: 2-4

CURRICULUM AREA(S): Health, Math

1. Draw, color, cut, label with name and price, and laminate menu items for the Ice Cream Parlour. Prepare wall menu as alternative.
2. Devise task cards for suggested activities. For example, have children select menu items, calculate price and pay cashier. They are to determine if proper change is given.

To evaluate have student list menu items and price and solve the math problems for change. Place paper in student folder.



SOURCE: Scoops of Ideas, OK: State Department of Education, 1980.

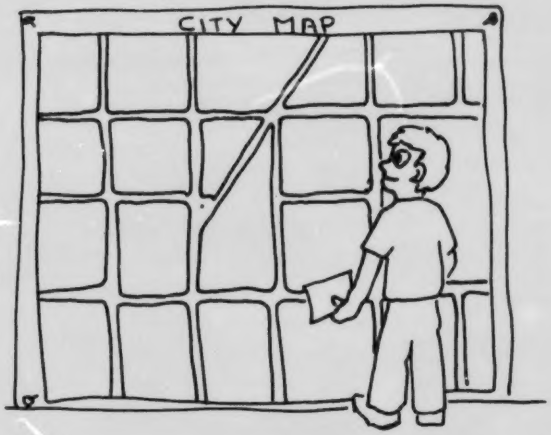
K T V

TITLE: My City

GRADE LEVEL: 4-6

CURRICULUM AREA(S): Social Studies
Studies
My city is neighborhoods living and working together.

Where do I live?



1. Obtain a city map (Chamber of Commerce, banks and realtors are good sources). Enlarge the map on butcher paper to cover a large wall area (the bigger, the better!). Provide each student with a "block" of paper scaled to the city map--on this block let the student draw his/her house and the other buildings on his/her block--the block would be labeled [Jerry's neighborhood] with each student's name. The completed block should be glued on the enlarged city map. The map should be kept and added to as the city study develops.
2. Obtain a city map and mount it on poster board. Allow each student to mark homes and parents place of work (if appropriate). Laminate the map and cut it into a jigsaw puzzle.
3. Obtain an aerial photograph of your city (source -- city planner or Chamber of Commerce).
   a. Identify as many items as possible (streets, trees, rivers, houses, railroads).
   b. Determine direction from a familiar landmark - (school or home).
   c. Walk in a different direction from this landmark each day - construct a map on clear plastic on the area covered. Lay over aerial photograph and the walk will come alive.

SOURCE: Touching, Living, Growing . . . Elementary Social Studies, OK: State Department of Education, 1981.

TITLE: Contraction Concentration

GRADE LEVEL: 2-5

CURRICULUM AREA(S): Language Arts

This game is played like Concentration. On one card write a contraction and on a second card write the two words that make the contraction.

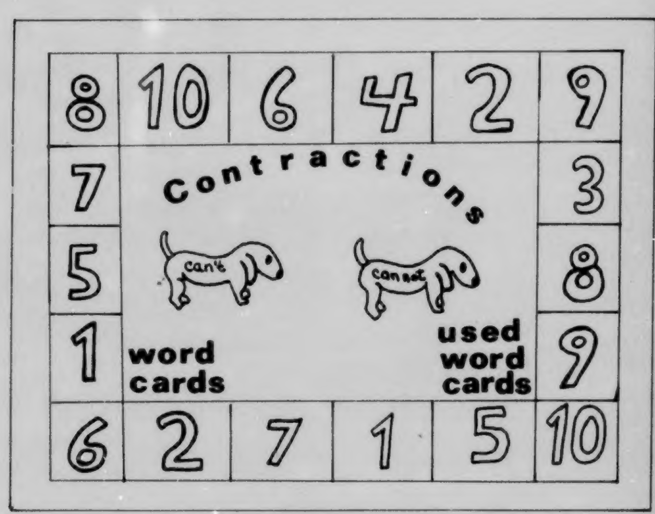
Shuffle the deck of cards and place one card, face down, on each number. Place the remaining cards face down, on the box marked **Word Cards.**

The first player turns over any two cards, hoping to match the contraction with the two words that it's made from. If no match is made, cards are turned face down and the next player turns over two cards.

When a match is made, the player gets the points under the cards and two new cards are put on those numbers. The player making the match gets another turn. Matched cards are put in the **Used Word Cards** pile.

SOURCE: A Wide Spectrum of Ideas, OK: State Department of Education, 1981.

The player with the most points at the end of the game or time period wins.



TITLE: Place Value

GRADE LEVEL: 3-6

CURRICULUM AREA(S): Math

Materials needed include dried peas or beans, tongue depressors, glue, felt board, counter pieces and dice.

Glue peas or beans 10 to a stick. As many as 10 sticks to 1,000.

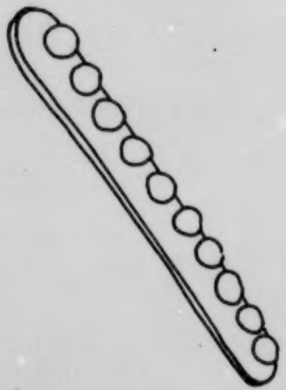
Introduce "place value" as groupings of 10. Use display on felt board of each group. (Ex: tens, hundreds, etc.)

Roll a die or spinner and have child receive that many sticks. How many peas? How would it be written? How many groups of 10? etc. (Ex: 8 sticks would = 80; 8 tens, 0 ones.)

Peas can be removed as partial groups when mastery level is sufficient. (Ex: 7 sticks full, 1 stick with 3 would = 73; 7 tens and 3 ones.)

Subtraction can be introduced when achievement level indicates readiness.

SOURCE: Jackque Allen, RESC, Anadarko, Oklahoma.

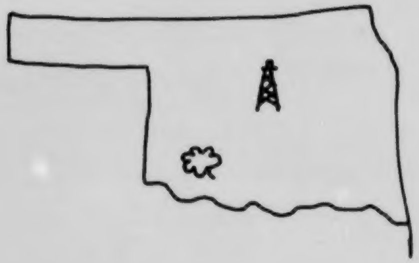


TITLE: Natural Resources Map

GRADE LEVEL: 4-6

CURRICULUM AREA(S): Art, Social Studies

Students will research the natural resources of Oklahoma. The class will then construct on the bulletin board a large map of Oklahoma showing the location of Oklahoma's natural resources. The map will include a list of products made from these resources and any other uses of the resources.



SOURCE: Classroom Learning Activities for Social Studies (CLASS), OK: State Department of Education, 1982.

K T V

TITLE: Pop Goes the Balloon

GRADE LEVEL: K-3

CURRICULUM AREA(S): Science

Objective: Children will learn that baking soda (a base) and vinegar (an acid) will cause a gas reaction.

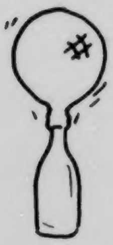
Materials Needed: One 10-oz. pop bottle, funnel, baking soda, vinegar (white), 1 balloon, food coloring.

Using the funnel, place some baking soda in the bottle, then add the vinegar. Quickly place the balloon on the top of the bottle. The reaction from the vinegar and baking soda will cause the balloon to blow up. After that, pop the balloon off!

After the teacher has demonstrated, let the children try. (The balloon must be placed on the bottle before the foam reaches the top of the bottle.)

For added fun put food coloring in the vinegar.

SOURCE: Jean-Marie Engelking (Laakman), Phillips University, Enid, Oklahoma.



K T V

TITLE: Volcano Eruption

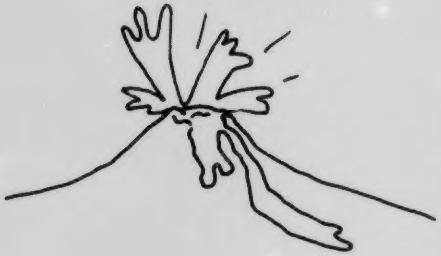
GRADE LEVEL: K-3

CURRICULUM AREA(S): Science

Materials Needed: baking soda, vinegar (white), Plaster of Paris, tempra paint, red food coloring, small cup or dish, $\frac{1}{4}$ cup measure, $\frac{1}{2}$ cup measure.

The children form a volcano using the Plaster of Paris. (Follow the directions on the package to prepare plaster.) Place the cup in the top and form the opening around the cup. After it dries, paint the volcano.

In the cup place a $\frac{1}{4}$ cup of baking soda. Add food coloring to a $\frac{1}{2}$ cup of vinegar, then pour it over the baking soda. The eruption wil flow over the top and down the sides of the volcano.



SOURCE: Jean-Marie Engelking (Laakman), Phillips University, Enid, Oklahoma.

TITLE: The Moeibus Strip

GRADE LEVEL: 4-6

CURRICULUM AREA(S): Math

Cut strips of paper 3 inches wide and 14 to 50 inches long.

Prepare enough strips so that each student will have 4 to 5 strips.

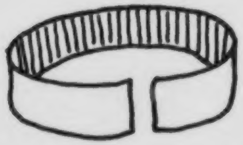
Have each student pick up the ends of one strip in opposite hands. The left hand should be kept steady, and the right hand used to provide 0, 1, 2 or 3 half-twists.

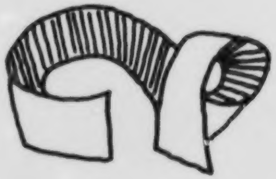
The student should make one of each type by taping or stapling the ends together.

The strip with one half-twist will look like the example.

Allow students to work with partners or in small groups to complete a chart.

In this chart, students should note characteristics like the number of pieces after each cut, the number of sides to those pieces, the relationship between the number of half-twist to the number of sides, etc.





SOURCE: A Product of Our Times, Mathematics Resource Book, K-8, OK: State Department of Education, 1981.

TITLE: Can You Learn It?

GRADE LEVEL: K-6

CURRICULUM AREA(S): All

Language Master and laminated cards.

1. Print words or math facts on cards with a grease pencil.
2. Record information as needed. (Ex: Math - record 5 x 3 = 15; or Spelling: record D-I-N-N-E-R, Dinner)
3. Have the student repeat each card 3 times.
4. Introduce any written reinforcement.
5. Continue as needed.

SOURCE: Jacque Allen, RESC, Anadarko, Oklahoma.

K T V

TITLE: Does Shape Matter?

GRADE LEVEL: K-2

CURRICULUM AREA(S):
Science

1. Give each student two equal size sheets of construction paper.
2. Crumple one and leave the other as is.
3. On cue, have students drop both pieces of paper.

Follow-up: Make parachutes, paper airplanes, kites, etc.

K T V

TITLE: Indian Cooking

GRADE LEVEL: 5-6

CURRICULUM AREA(S): Home Economics, Social Studies

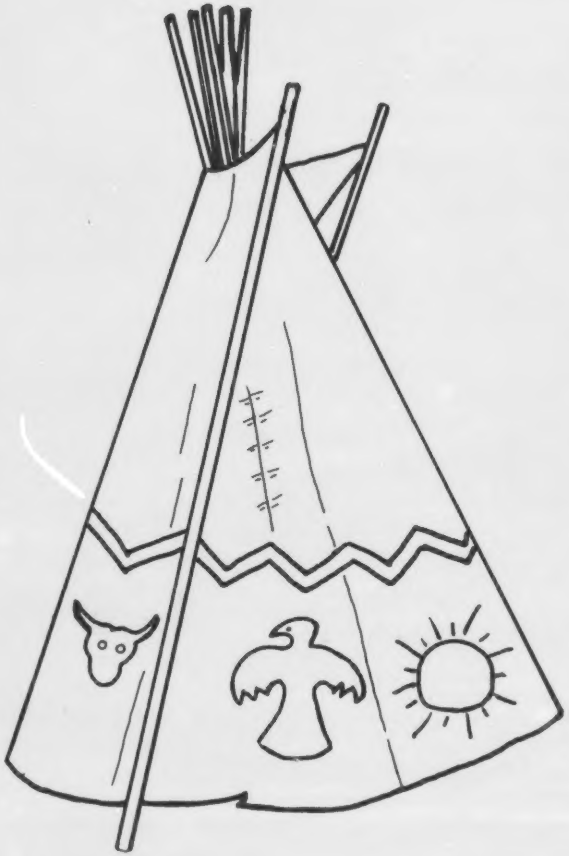
While studying Indian culture, present the following Indian recipes to the students:

1. Dried Meat Cakes

   Put tender lean meat in the oven until dry and brown. Pound or grind until it is the consistency of coarse cornmeal. Mix the dried, ground meat with marrow bone, butter and sugar to taste. Form into small cakes and let dry. Serve cold.

2. Dried Corn Boiled

   Boil dried corn until tender. Season with salt and pepper.



SOURCE: Classroom Learning Activities for Social Studies (CLASS), OK: State Department of Education, 1982.

K, T, A Activities

TITLE: Football Word Call

GRADE LEVEL: K-6

CURRICULUM AREA(S): All

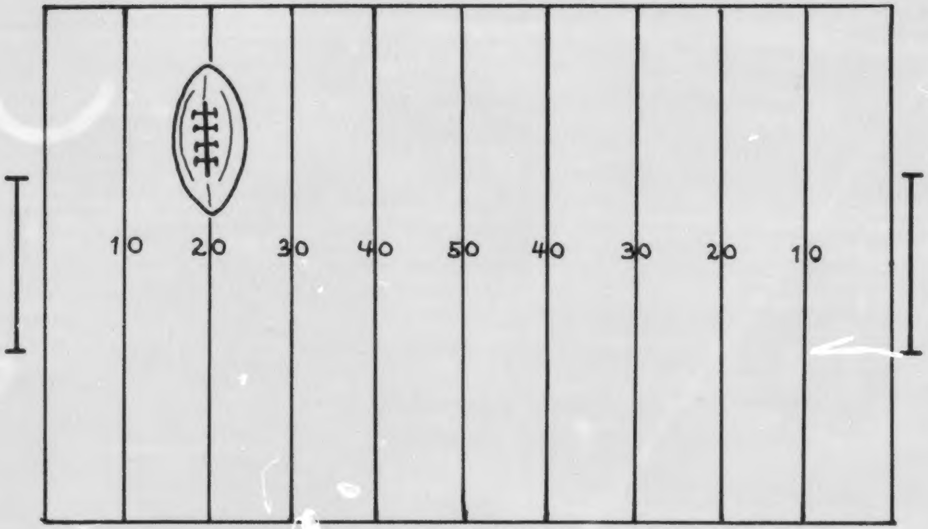
You may use either a file folder, game board or a large vinyl sheet which you have sectioned into a football field.

Use a small miniature football.

Provide cards with appropriate vocabulary.

Teams take turns drawing cards and pronouncing the words. Players move the ball 10 yards for each correct response. Each goal counts 6 points. The team with the most points at the end of the period wins.

The game may be varied by having students divide words into syllables, use the words in sentences or define words. You may also have the teams draw cards at the same time and race to find the word in the dictionary.



SOURCE: Scoops of Ideas, OK: State Department of Education, 1981.

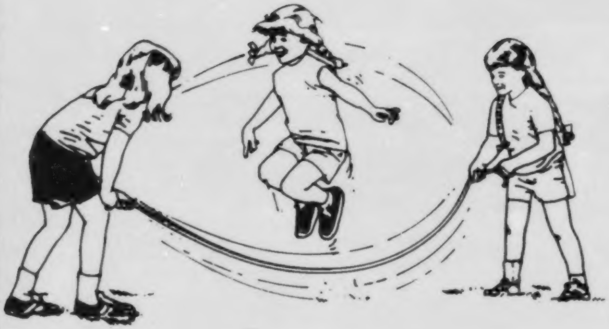
TITLE: Jump Rope Chant

GRADE LEVEL: 1-2

CURRICULUM AREA(S): P.E.

Teach Aerospace Chant.

Students will take turns demonstrating their ability to match the action with the chant as they jump rope.



Astronaut, astronaut, turn around.
Astronaut, astronaut, touch the ground.
Astronaut, astronaut, jump up high.
Astronaut, astronaut, say good-bye.

Astronaut, astronaut, in the rocket you go.
Astronaut, astronaut, you start so slow.
Astronaut, astronaut, high in the air.
Astronaut, astronaut, please, take care.

Astronaut, astronaut, you'll be there soon.
Astronaut, astronaut, you've landed on the moon.
Astronaut, astronaut, soon, home you'll go.
Astronaut, astronaut, we've missed you so!

SOURCE: High Flight -- Aerospace Activities, K-12, OK: State Department of Education, 1982.

K, V, A Activities

TITLE: Solar System Play

GRADE LEVEL: 3-6

CURRICULUM AREA(S): Science

There are nine planets rotating around the sun. This is called the Solar System.

Simple costumes to represent the different planets can be made and worn by the students as they portray the different planets of the solar system and the sun.

Sun

I am the sun, your daytime star.
I am the ruler of the solar system.
The planets are members of my family.
I keep them in their paths and control their speeds.
I shine by my own light, but the planets catch my light and reflect it.
Here is my family now.
Would you like to meet them?

Mercury

I am Mercury, the swiftest of the sun's family.
I go around the sun in 88 days.
I keep one side to the sun so on one side it is always day and on the other side it is always night.
You cometimes call me the morning and evening star.

Venus

I am Venus, the second planet from the sun.
My path is between the earth and sun, so I am very hot.
Clouds around me reflect the sun's light, making me seem very bright.
You also call me the morning and evening star.

Earth

I am the Earth, the planet on which you live.
I travel on the sun's third road and turn myself around every 24 hours to make day and night.
I go around the sun every 365 days, which makes one year.
One moon goes around me as I go around the sun.

Mars

I am Mars, colder than the earth because I'm further from the sun.
I look red and my color is thought to come from minerals in my rocks and soil.
I, too, have day and night, but my year is nearly twice as long as yours because it takes me longer to go around the sun.
Maybe you can visit me some day.

Jupiter

I am Jupiter, the icy giant of the sky.
I travel in the sun's 5th orbit, but my road is so long it takes nearly 12 years to go around the sun.
I am the largest of the planets and I have 12 moons around me.

Saturn

They call me Saturn, the planet with beautiful rings around me.
I am very large and bright, and my colored rings may be formed by ice reflecting light somewhat like raindrops forming a rainbow.
I am cold because I am far from the sun.

I travel on the 6th road around the sun and it takes $29\frac{1}{2}$ years to go around.

Uranus

I, Uranus, the 7th planet from the sun, am a green giant four times larger than the earth.

Very little is known about me yet, but my journey around the sun takes about 84 years.

Neptune

I am Neptune, and I look enough like Uranus to be his green twin, only smaller because I'm further away from you.

My road is the 8th circle around the sun, and so very long that it takes about 165 years to go around.

Men on your earth are working very hard to find out more about me.

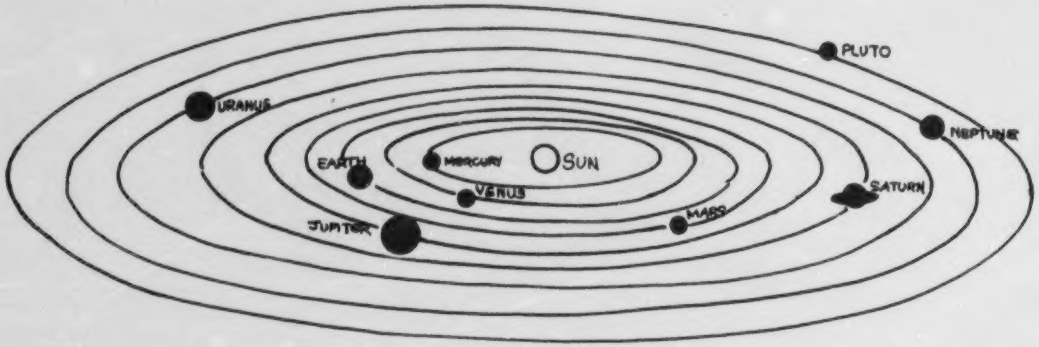
Pluto

I am Pluto, called the mysterious planet because I was discovered only about 40 years ago.

I am very small and dark and travel in the 9th path around the sun.

I am about $3\frac{1}{2}$ billion miles from the sun and I take 248 years to circle once.

I am the last known planet.



SOURCE: High Flight - Aerospace Activities, K-12, OK: State Department of Education, 1982.

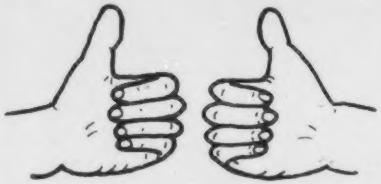
K T V

TITLE: Distinguishing Between "b" and "d"

GRADE LEVEL: 1

CURRICULUM AREAS: Handwriting, Reading

Most lessons can be taught through any strength. Take, for example, the problem of distinguishing between "b" and "d". Kinesthetic learners can form these letters physically. Have them make a loose fist with both hands, put their thumbs straight up and turn the fists so they can see their fingernails. The left hand represents the "b" and the right hand, the "d". (See illustration.)



Often, all visual learners need is a good model of the letters "b" and "d." Use an alphabet chart or other large models to point out the difference in the two letters. Then, when writing these letters or encountering them in reading or spelling, have those children quickly check them against the visual model.

Lip moving and finger pointing when reading have long been discouraged by teachers. However, for auditory and kinesthetic learners, these devices may be an aid to reading. Permitting auditory children to move their lips will probably result in more enjoyable reading. In reality, many adults who are good readers still move their lips or subvocalize when they read.

Let the kinesthetic learner point, but encourage him to use two fingers, not just one. This is easier for the young child and is also a better way of isolating the word being read.

The easiest way for an auditory person to learn to distinguish between "b" and "d" is to talk through the strokes of each letter as it is written. The stroke description for "b" is: "Begin at the headline, pull down straight to the baseline. Make a forward circle, touching the midline, the baseline, and the first stroke." The stroke description for "d" is very different: "Make a backward circle touching the midline and the baseline. Begin at the headline, pull down straight to the baseline, touching the right side of the circle."

SOURCE: Walter Barbe and Michael N. Milone, Jr., "Modality," Instructor (January 1980). Reprinted by special permission from Zaner-Bloser, Inc., Columbus, Ohio.

TITLE: A Modality-Based Handwriting Curriculum

GRADE LEVEL: 1-3

CURRICULUM AREA(S): Handwriting

Hand writing is essentially a kinesthetic task, so many teachers believe that there is no way to teach writing effectively through the other modalities. Quite the opposite is true. The following list of objectives can serve as the foundation of a handwriting curriculum that relies upon each of the three educationally relevant modalities (Barbe and Lucas, 1978).

1. Visual (with model)
    a. Given letter models, writes lower-case manuscript letters
    b. Given letter models, writes upper-case manscript letters
    c. Given numeral models, writes numerals 1-30
    d. Given models, writes number words one - ten
    e. Given letter models, writes without reversal letters that are frequently reversed: b-d; p-g-q
    f. Given word models, writes without reversal words that are frequently reversed: on-no; was-saw
    g. Given letter models, writes lower-case letters grouped by similarity of strokes
    h. Given letter models, writes upper-case letters grouped by similarity of strokes
    i. Given models, writes punctuation marks: comma, period, question mark, exclamation mark, quotation marks
2. Auditory (with oral directions, letter name or strokes)
    a. Told letter names, writes lower-case manuscript letters
    b. Told letter names, writes upper-case manuscript letters
    c. Given letter sound, writes letter
    d. Told letter names, says letter strokes
    e. Told numeral names, writes numerals 1-30
    f. Told number names, writes number words one - ten
    g. Given oral directions, writes lower-case letters grouped by similarity of strokes
    h. Given oral directions, writes upper-case manuscript letters grouped by similarity of strokes
    i. Told names of punctuation marks, writes: comma, period, question mark, exclamation mark, quotation marks
    j. Told letter names, writes without reversal letters that are frequently reversed: b-d; p-g-q
    k. Told words, writes without reversal words that are frequently reversed: on-no; was-saw
3. Kinesthetic (tracing, motioning, chalkboard)
    a. Given example, traces or motions in air lower-case letters grouped by similarity of strokes
    b. Given example, traces or motions in air the upper-case letters grouped by similarity of strokes
    c. Given example, traces or motions numerals

SOURCE: Teaching Handwriting Through Modality Strengths, pamphlet. Copyright © 1980 Zaner-Bloser, Inc., Columbus, Ohio. Reprinted by permission.

K, V/K, A

Activities

TITLE: Musical Jugs

GRADE LEVEL: 1-3

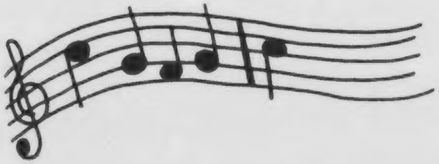
CURRICULUM AREA(S): Health, Music, P.E.

This activity requires an instrumental record such as "Pretend" by Hap Palmer. You will also need the book, T.A. For Tots by Alvyn Freen.

The time and group size is flexible. Begin by reading Chapter 3 of T.A. For Tots and discussing what makes people feel good and what makes people feel bad. Tell the students that we all need to be hugged at times to be happy, healthy people and that you are going to play a game to give everyone a warm feeling.

The rules are (1) Walk around the room without touching anyone while listening to the music. (2) When the music stops, give one person nearby a warm hug until the music begins again. (3) Hug a different person each time. (4) If you don't want to play, you may sit and watch.

After this is done several times, talk about how it felt. This game can get rowdy, but if limits are set, it is great fun and lets children know touching is OK. The teacher will enjoy participating also.



SOURCE: Classroom Learning Activities for Social Studies (CLASS), OK: State Department of Education, 1982.

TITLE: Remember

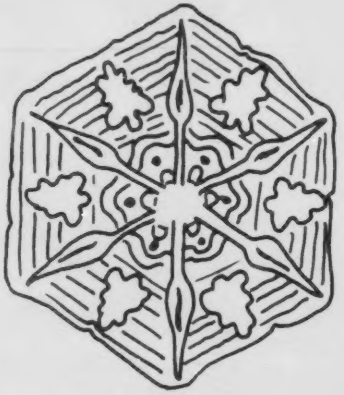
GRADE LEVEL: 2-6

CURRICULUM AREA(S): All

Tack the spelling list, math problems, social studies vocabulary, etc. to a bulletin board across the room. The student who must be active will go to the list, practice spelling the word and remember the word until he gets to his seat to write it down. This gives the student freedom to move about the room and practice visual memory.

SPELLING LIST

SOURCE: Arnette Hayes, Lincoln School, Ardmore, OK.



T, V Activities

TITLE: St. Patrick's Day Scramble

GRADE LEVEL: 4-6

CURRICULUM AREA(S): Language
Arts, Social Studies

Cut out the words for each sentence. Scramble the words. Put the words in the correct order. Write the sentence. Study the parts of speech.

1. Saint Patrick's Day is named after the patron saint of Ireland.
2. He died on March 17, 1500 years ago.
3. There are many legends about the kindly bishop and what he did for Ireland.
4. St. Patrick did something special for learning.
5. The bishop taught people to read and write.
6. It is an old custom to wear a green shamrock or a bit of green on Saint Patrick's Day.
7. The shamrock is the national flower of Ireland.

SOURCE: Celebrate Learning . . . Holidays in the Classroom, K-6, OK: State Department of Education, 1982.

T V

TITLE: Matching Words

GRADE LEVEL: K-1

CURRICULUM AREA(S): Readiness, Reading

Students find matching words, connecting them with lines.

run	red	five
red	ran	fine
ran	run	fare
was		went
say		want
saw		what
pat		one
put		on
pet		our

SOURCE: Reading Sampler, OK: State Department of Education, 1980.

245

BPBB
VYVV
NMNN
EEFE
CGCC

hkkxk
cocce
bdbpb
vwwvw
nnhnr

TITLE: Letter Match

GRADE LEVEL: K-1

CURRICULUM AREA(S): Reading

Use worksheets with several rows of letters with 4 or 5 letters per row.

Have students find and mark three letters that are the same.

Repeat this procedure for each row. Caution pupils that the first letter is not always the one to match.

SOURCE: Reading Sampler, OK: State Department of Education, 1980.

246

TITLE: Know the Presidents

GRADE LEVEL: 5-6

CURRICULUM AREA(S): Social Studies

For this activity you will need a picture of each President.

1) Write the name of each president below the picture with grease pen or removable substance.
2) Number the presidents in order with a colored pen (wax pencil or removable substance).
3) These can be used as repetitive practice - flash cards. The name or number can be removed dependent on data wanted.
4) Count down games can be played, cards can be grouped, put in order of term, etc.

SOURCE: Jacque Allen, RESC, Anadarko, Oklahoma.

TITLE: Oklahoma

GRADE LEVEL: 4-6

CURRICULUM AREA(S): Social Studies

Laminate a state map. Cut the map into six parts using the boundaries of the six regions. Use as a jigsaw puzzle. Later, cut up each region to make a more difficult puzzle.

SOURCE: Touching, Living, Growing. . .Elementary Social Studies, OK: State Department of Education, 1981.

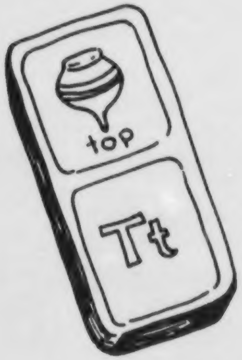
TITLE: Learning Letter Sounds

GRADE LEVEL: K-1

CURRICULUM AREA(S): Reading

Prepare domino-type cards with a letter (mix capital and small letters on one half and a simple picture on the other half. Limit the number of different letters used to 10 or 15.

The child plays as "Dominoes" matching the letters and the pictures according to beginning sounds.



SOURCE: Jacque Allen, RESC, Anadarko, Oklahoma.

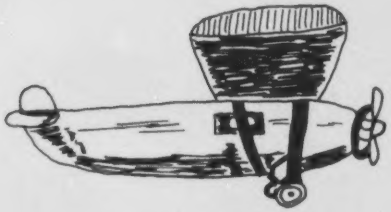
TITLE: Secret Messages

GRADE LEVEL: 4-6

CURRICULUM AREA(S): Math

Distribute a copy of each worksheet to students

Instruct students to match the answer to the mathematical problem with the key printed at the top of the page to find the secret message.



SOURCE: High Flight - Aerospace Activities, K-12, OK: State Department of Education, 1982.

SECRET MESSAGE

A	B	C	D	E	F	G	H	I	J	K	L	M
1	2	3	4	5	6	7	8	9	10	11	12	13

N	O	P	Q	R	S	T	U	V	W	X	Y	Z
14	15	16	17	18	19	20	21	22	23	24	25	26

20+3 8+9 9-7 4+3 2+1 6+3 5+5 7+6 7+8

20+5 8-7 2+5 7+2 7+7 9+6 18-9

6+5 9+8 6+4 7+5 6+8 6+6 8-4 21+2 2+2

6-4 7-3 1+1 9+3 5+9 9-5 10-4

9+2 21+2 10+7 5+8 8+7 8+6

7-6 3+2 7+3 9-5 4+8 5+7 7+7 9+6 18-9

9-8 6+8 20+3 13-12 18-16 5+9 9+8 8-3

8-4 10-5 3+6 8-7 2+0 7+4 2+8 5-1 20+5

10-8 8+1 10+10 20+4 10-6 9+1 20+1 9+5 8-4

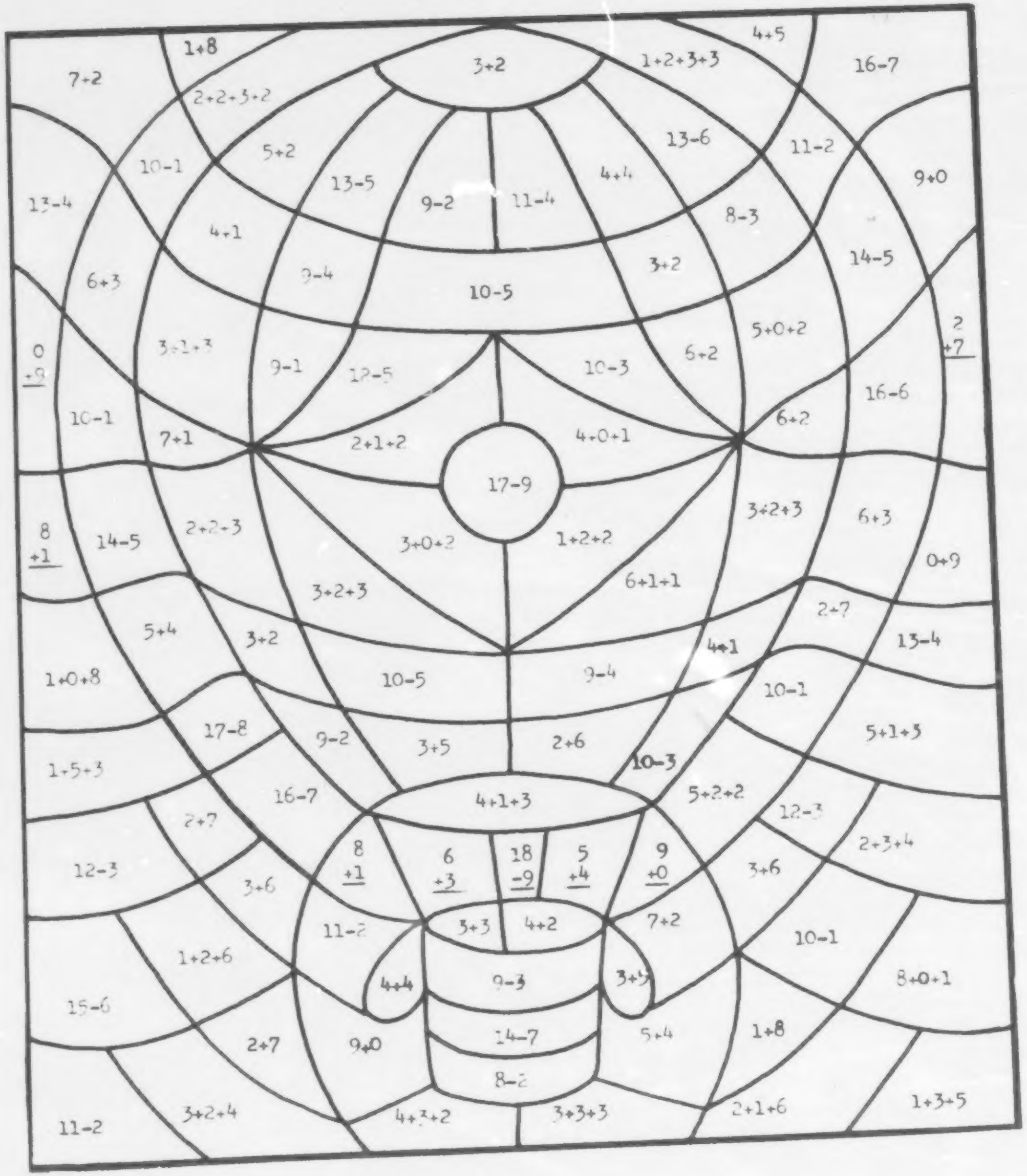
3+3 16-15 8+2 8+9 8+4

TITLE: Hidden Aircraft

GRADE LEVEL: 2-5

CURRICULUM AREA(S): Math

Students are to work the math problems then color the pictures as desired.


7-2
1+8
2+2+3+2
3+2
1+2+3+3
4+5
16-7
10-1
5+2
13-5
9-2
11-4
4+4
13-6
11-2
9+0
13-4
4+1
9-4
10-5
3+2
8-3
14-5
6+3
3+1+3
9-1
12-5
10-3
6+2
5+0+2
2
+7
0
+9
16-6
10-1
7+1
2+1+2
4+0+1
6+2
17-9
8
+1
14-5
2+2+3
3+0+2
1+2+2
3+2+3
6+3
0+9
3+2+3
6+1+1
2+7
5+4
3+2
4+1
13-4
1+0+8
10-5
9-4
10-1
17-8
9-2
3+5
2+6
10-3
5+1+3
1+5+3
16-7
4+1+3
5+2+2
12-3
2+7
8
+1
6
+3
18
-9
5
+4
9
+0
2+3+4
12-3
3+6
3+6
11-2
3+3
4+2
7+2
10-1
1+2+6
4+4
9-3
3+5
8+0+1
15-6
2+7
9+0
14-7
5+4
1+8
8-2
11-2
3+2+4
4+3+2
3+3+3
2+1+6
1+3+5

SOURCE: High Flight -- Aerospace Activities, K-12, OK: State Department of Education, 1982.

T V

TITLE: Tracing

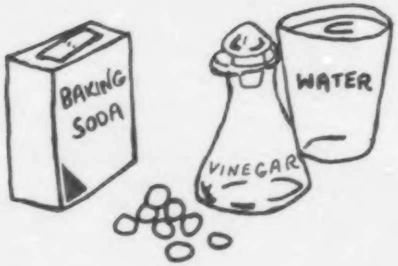
GRADE LEVEL: K-2

CURRICULUM AREA(S): All

For this activity you will need one 9 x 12 cake pan and one box table salt.

Spread salt in bottom of pan to the depth of 1/4 inch. Have student with tactile needs trace the letter that he is learning into the salt. Shake the pan and retrace letter for practice.

SOURCE: Arnette Hayes, Lincoln School, Ardmore, Oklahoma.



T V

TITLE: Stable vs. Unstable Air

GRADE LEVEL: 5-6

CURRICULUM AREA(S): Science

Fill a glass 2/3 full of water. Shake about one-half teaspoon of baking soda into the water and stir until dissolved. Drop four mothballs into the glass. Obviously each mothball sinks to the bottom. Now add a little vinegar to the glass. The mothballs begin to rise. Some may remain suspended in the water for a while, but eventually all will reach the top, fall back to the bottom of the glass, and in due time, bob up again.

The vinegar and soda interact to form carbon dioxide. When bubbles of the gas attach themselves to the mothball, the mothball becomes a little bigger and lighter than before--in other words, less dense. To remain suspended in the water, the density of the bubble--enlarged mothball, must equal the density of the water. Eventually, when the mothball acquires enough bubbles and is lighter than the water, the mothball will rise to the top.

Parcels of air in the troposphere act very much like these mothballs, sometimes staying put, sometimes rising, sometimes sinking, depending on how the density of the parcel compares to the density of the surrounding air.

SOURCE: Outdoor Education, OK: State Department of Education, 1981.

1. Put a O around the ball.
2. Put an X on the fish.
3. Draw a ____ under the bell.
4. Draw a ____ from the fish to the cake.
5. Put a ☐ around the cake.

TITLE: Recognizing and Writing Rhyming Words Visually

GRADE LEVEL: 2

CURRICULUM AREA(S): Language Arts, Reading

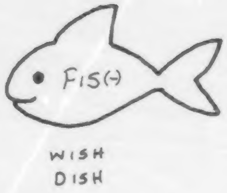
This activity is designed to help students recognize and write rhyming words visually.

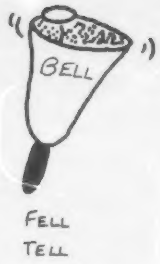
You will need newsprint, pencil, construction paper, paper brads.

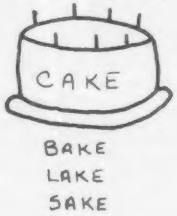
Suggest students make rhyming booklets. See example at right.

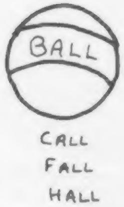
Students will write as many rhyming words as they can.

SOURCE: Reading Sampler, OK: State Department of Education, 1980.


FISH
WISH
DISH


BELL
FELL
TELL


CAKE
BAKE
LAKE
SAKE


BALL
CALL
FALL
HALL

T V

TITLE: Leaf Printing

GRADE LEVEL: 5-6

CURRICULUM AREA(S): Art, Science

Cover area with old newspapers. Collect leaves and lay on table vein side up. Poor small amounts of ink onto flat surface. Roll leaves with ink. Turn leaves over and place vein side down on surface desired to be printed. Cover with a clean sheet of paper and again roll over the leaves. Remove paper and leaves.

Veins, texture, lobes, stem position, and leaf shape can be studied from these printings.

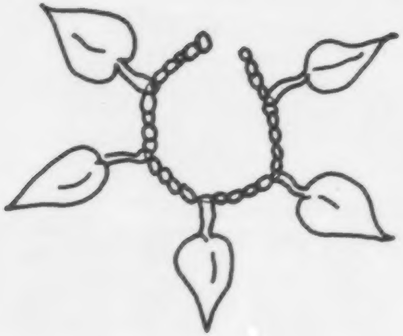
Triangular pieces of fabric can be printed to look like scarves.

Make place mats or pictures.

Leaves arranged in a circle of 5 can be made to resemble flowers.

Make leaf collages.

SOURCE: Outdoor Education, OK: State Department of Education, 1981.



T V

TITLE: Fitness-like Test

GRADE LEVEL: 1-6

CURRICULUM AREA(S): Health, P.E.

Have the students make a list of 5 to 10 physical activities they enjoy. This list might include activities they play with someone else or activities they play by themselves.

When the lists are finished, explain the "coding procedure" to be used:

1. A dollar sign ($) is placed by any activity that costs money to do.
2. An asterisk (*) is placed by any activity that has been done within the last week.
3. An (R) is placed by any activity which has an element of risk involved.
4. An (S) is placed by any activity which involves speed to perform better.
5. An (M) is placed by any activity which involves muscular strength to perform better.
6. An (A) is placed by any activity which involves ability to perform better.
7. A (C) is placed by any activity which involves coordination to perform better.
8. An (E) is placed by any activity which involves endurance to perform better.

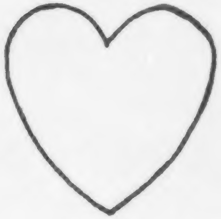
SOURCE: Outdoor Education, OK: State Department of Education, 1981.

TITLE: Tender Hearts

GRADE LEVEL: 1-2

CURRICULUM AREA(S): Math

Cut out an acetate heart this size. If the acetate heart can cover numerals that total 10, trace around the heart.



5 6 9 5

3

7 2 4 1 5

2 8 7 2 4

4 7 5 10 8 3

3 5 0 4 8 5

6 2 3 8 2 5 6

4

2 5 6 3 4

5 6 7 8

SOURCE: Celebrate Learning. . . Holidays in the Classroom, K-6, OK: State Department of Education, 1982.

TITLE: Rainbow Race

GRADE LEVEL: 4-6

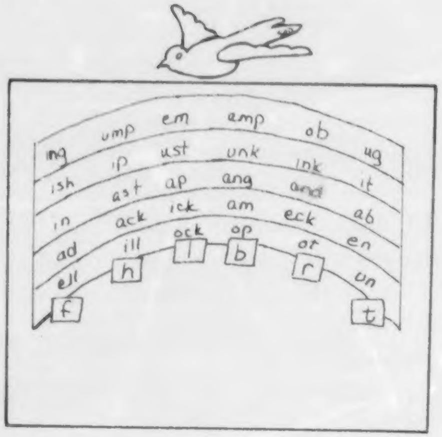
CURRICULUM AREA(S): Language Arts, Reading, Spelling

You will need tagboard and color marking pens. On the tagboard, draw several colored arcs to represent the rainbow. Make each ray approximately two inches wide. Print phonograms at intervals along the rainbow.

Attach an envelope to the bottom of the tagboard. In it, put squares of tagboard with single consonants, blends or diagraphs written on them.

The students make words by combining the consonants with the vowel phonograms. The object is to get to the end of the rainbow by making as many words as possible.

SOURCE: Reading Sampler, OK: State Department of Education, 1980.



TITLE: 999

GRADE LEVEL: 4-6

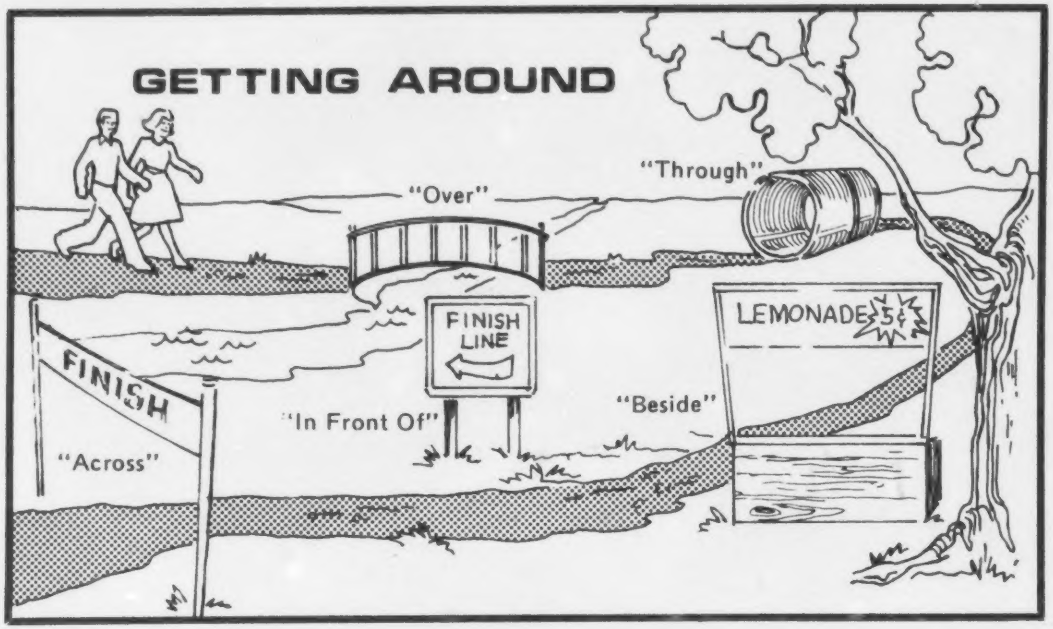
CURRICULUM AREA(S): Math

Prepare and use a transparency like the example chart in the same column. Have students complete similar duplicated charts for numerals up to 999.

Students can staple chart sheet together to make "My 999 Book."

1	2	3	4	5	6	7	8	9	10
11	12	13	14						

SOURCE: A Product of Our Times, Mathematics Resource Book, K-8, OK: State Department of Education, 1981.



TITLE: Spatial Relationships

GRADE LEVEL: 2

CURRICULUM AREA(S): Reading, Math

Prepare bulletin boards on spatial relationships as pictured above.

SOURCE: A Product of Our Times, Mathematics Resource Book, K-8, OK: State Department of Education, 1981.

263

TITLE: Picture & Bar Graphs

GRADE LEVEL: K-3

CURRICULUM AREA(S): Math

Prepare a picture graph of the number of boys and girls in the class for the bulletin board. Each child can draw a small image of self, cut out the image and paste it onto the large sheet. Lead discussions on "How many boy images on graph and how many boys in class?" etc.

Use a large sheet of posterboard as a backdrop and measure the children's heights at several months (color-coded). Then fill in the measuring line to make bar graphs. Discuss growth patterns and amounts.

SOURCE: A Product of Our Times, Mathematics Resource Book, K-8, OK: State Department of Education, 1981.

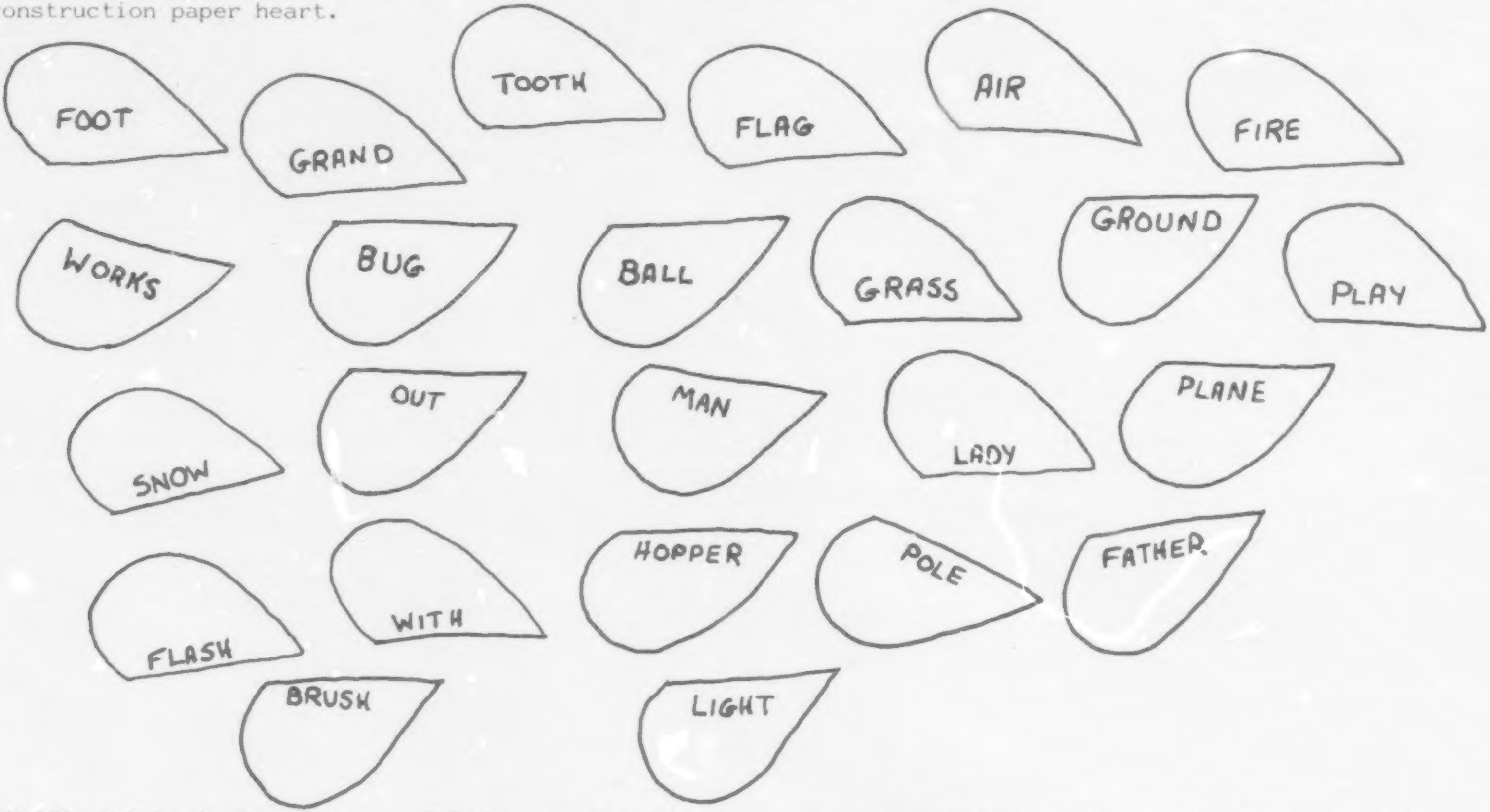
264

TITLE: Broken Hearts

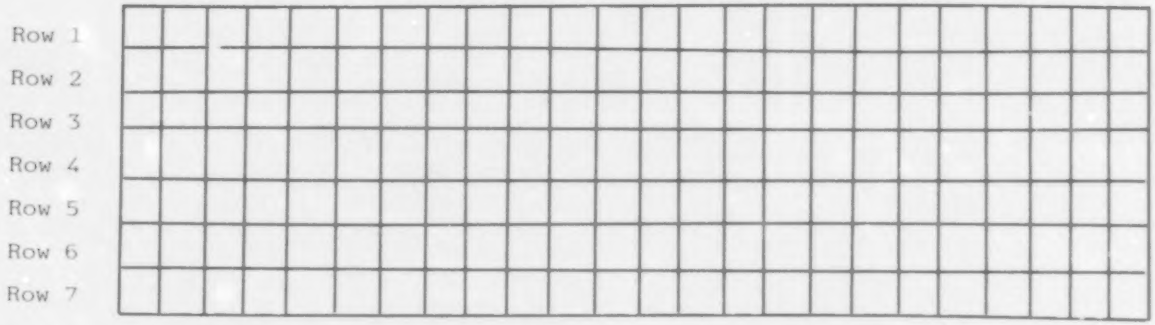
GRADE LEVEL: 1-2

CURRICULUM AREA(S): Language Arts

Mend these broken hearts by matching the halves to make compound words. Glue the halves on a big red construction paper heart.


FOOT
GRAND
TOOTH
FLAG
AIR
FIRE
WORKS
BUG
BALL
GRASS
GROUND
PLAY
SNOW
OUT
MAN
LADY
PLANE
FLASH
WITH
HOPPER
POLE
FATHER
BRUSH
LIGHT

SOURCE: Celebrate Learning. . .Holidays in the Classroom, K-6, OK: State Department of Education, 1982.



TITLE: Pictures From Space

GRADE LEVEL: 5-6

CURRICULUM AREA(S): Math, Science

Did you ever wonder how spacecraft like the Pioneer send pictures to Earth from distant planets?

The sound of a picture returning from space is just a collection of strange "bleeps" and "blips." A computer is able to turn these sounds into a picture.

Follow the code to make your own picture. Leave "bleep" squares blank and fill in "blip" squares with pen or pencil.

SOURCE: High Flight - Aerospace Activities, OK: State Department of Education, 1982.

Row 1 bleep-bleep

Row 2 bleep-blip-bleep-bleep-bleep-blip-bleep-bleep-bleep-blip-bleep-bleep-bleep-blip-blip-blip-blip-bleep-bleep-bleep-blip-bleep-bleep-bleep

Row 3 bleep-blip-blip-bleep-bleep-blip-bleep-bleep-blip-bleep-blip-bleep-bleep-blip-bleep-bleep-bleep-bleep-bleep-blip-bleep-blip-bleep-bleep

Row 4 bleep-blip-bleep-blip-bleep-blip-bleep-bleep-blip-blip-blip-bleep-bleep-blip-blip-blip-blip-bleep-bleep-blip-blip-blip-bleep-bleep

Row 5 bleep-blip-bleep-bleep-blip-blip-bleep-blip-bleep-bleep-bleep-blip-bleep-bleep-bleep-bleep-blip-bleep-blip-bleep-bleep-bleep-blip-bleep

Row 6 bleep-blip-bleep-bleep-bleep-blip-bleep-blip-bleep-bleep-bleep-blip-bleep-blip-blip-blip-blip-bleep-blip-bleep-bleep-bleep-blip-bleep

Row 7 bleep-bleep

TITLE: Estimate and Measure Volumes

GRADE LEVEL: 4-6

CURRICULUM AREA(S): Math

Have students bring various containers (cans, bottles, boxes). Remove or cover all labels that state the volume of each container. Let students estimate how much liquid or solid each container will hold. Record these estimates. Then have students calculate the actual volume by using appropriate mathematical formulas and by using standard measures of sand or water to fill each container. Record volumes obtained by each of these methods. Compare with recorded estimates. Have students calculate percentage of difference.

SOURCE: A Product of Our Times, Mathematics Resource Book, K-8, OK: State Department of Education, 1981.

TITLE: Mixing Colors

GRADE LEVEL: K-1

CURRICULUM AREA(S): Art, Science

This activity may be used to encourage the discovery of how the secondary colors are made by mixing two primary colors together. Primary colors are red, yellow and blue. By combining different combinations we will make green, orange and purple. Show the children how to use the medicine droppers to add colored water to their cartons and encourage the discovery of secondary colors by mixing red with blue to make purple, etc.

You will need 3 to 4 medicine droppers; small bowls; red, yellow and blue food coloring; several white plastic - foam egg cartons with tops removed; pitcher of water.

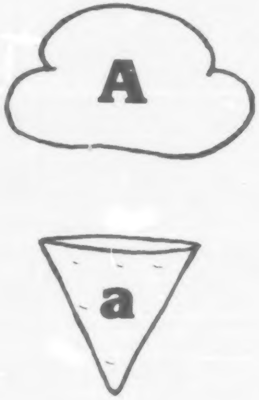
SOURCE: Meme Wheeler, Phillips University, Enid, Oklahoma.

TITLE: Dippy Alphabet

GRADE LEVEL: K-1

CURRICULUM AREA(S): Reading

1. Cut 26 cones.
2. Cut 26 ice cream dips.
3. Print uppercase letters on one and lowercase letters on the other; laminate.
4. Place in an envelope or baggie.
5. Have student match capital and small letters.



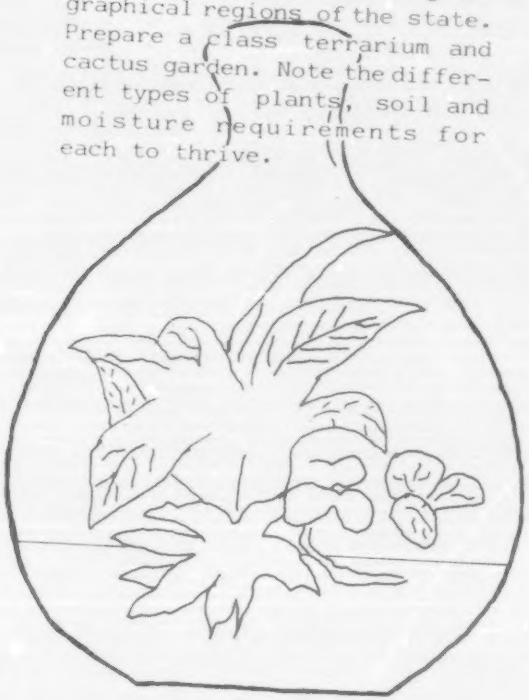
SOURCE: Scoops of Ideas, OK: State Department of Education, 1980.

TITLE: From Forest to Cactus

GRADE LEVEL: 6

CURRICULUM AREA(S): Science, Social Studies

Compare the different geographical regions of the state. Prepare a class terrarium and cactus garden. Note the different types of plants, soil and moisture requirements for each to thrive.



SOURCE: Oklahoma . . . OK, OK: State Department of Education, 1981.

TITLE: TV Guide Treasure Hunt

GRADE LEVEL: 3-6

CURRICULUM AREA(S): Language Arts

Find and underline in a TV schedule one example of each item named below. Write the page number of the blank line at the end of each item.

(Variations: Write the name of the show on the blank provided; for beginning readers, parents and child read over the selections and then let the child respond orally.)

1. a daily talk show

   ____

2. a daily game show

   ____

3. a sport special

   ____

4. a weekly stunt show

   ____

5. a movie that starts between 7:00 pm and 9:00 pm

   ____

6. a nightly game show

   ____

7. a show dealing with government or politics

   ____

8. a national news report

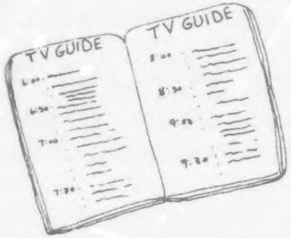
   ____

9. a fine arts show

   ____

10. a local news report

   ____



SOURCE: Reading: Parents, Teachers and Kids, Inc., OK: State Department of Education, 1982.

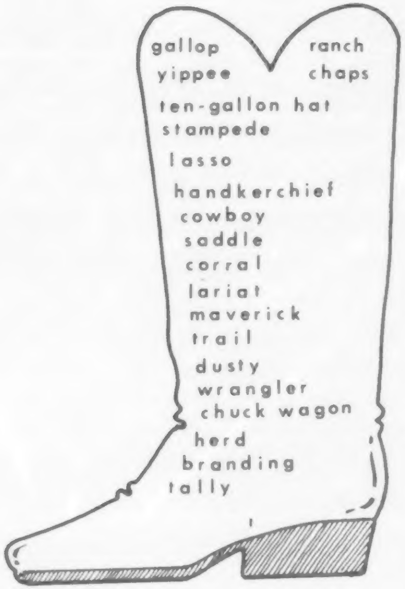
T V

TITLE: Cowboy Story Starters

GRADE LEVEL: 4-6

CURRICULUM AREA(S): Language Arts

Write a story about cowboys using at least 10 of the words listed on the boot.


gallop
ranch
yippee
chaps
ten-gallon hat
stampede
lasso
handkerchief
cowboy
saddle
corral
lariat
maverick
trail
dusty
wrangler
chuck wagon
herd
branding
tally

SOURCE: Oklahoma . . . OK, OK: State Department of Education, 1981.

273

T V

TITLE: Can You Label the States or Can You Label the Capitals

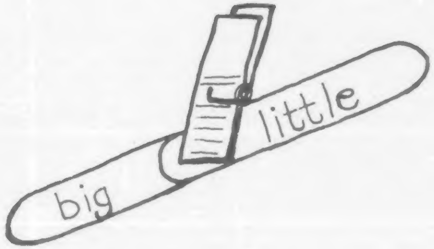
GRADE LEVEL: 5-6

CURRICULUM AREA(S): Social Studies

Use a large map of the United States, with the states outlined. Place a small piece of two-sided tape in each state, or at the side of the smaller eastern states. Laminate states or capitals or abbreviations; labels listing all 50 are placed on the tape. (Labels laminated on both sides will last longer, as well as the tape.)

Students can use this center individually or in a small group. Have a copy of the United States or list a page in the Social Studies book they can look on to check their work. Little individual charts can be kept by the student to see if progress is being made.

SOURCE: Scoops of Ideas, OK: State Department of Education, 1980.



T V

TITLE: Word Pairs

GRADE LEVEL: 3-5

CURRICULUM AREA(S): Language Arts

Spray paint the tongue depressors with two colors for antonyms; two colors for homonyms, etc. Use one color for the first set of antonyms, and the matching antonym. Print the antonyms on the tongue depressors after the paint has dried, with permanent felt tipped pen. As the pupil matches the antonyms, he/she clips them together with a clothespin. (Make a contrasting set of words for homonyms, synonyms, and compound words). Include a list of words typed and glued in bottom of can or lid for self-checking.

SOURCE: Reading Sampler, OK: State Department of Education, 1980.

274

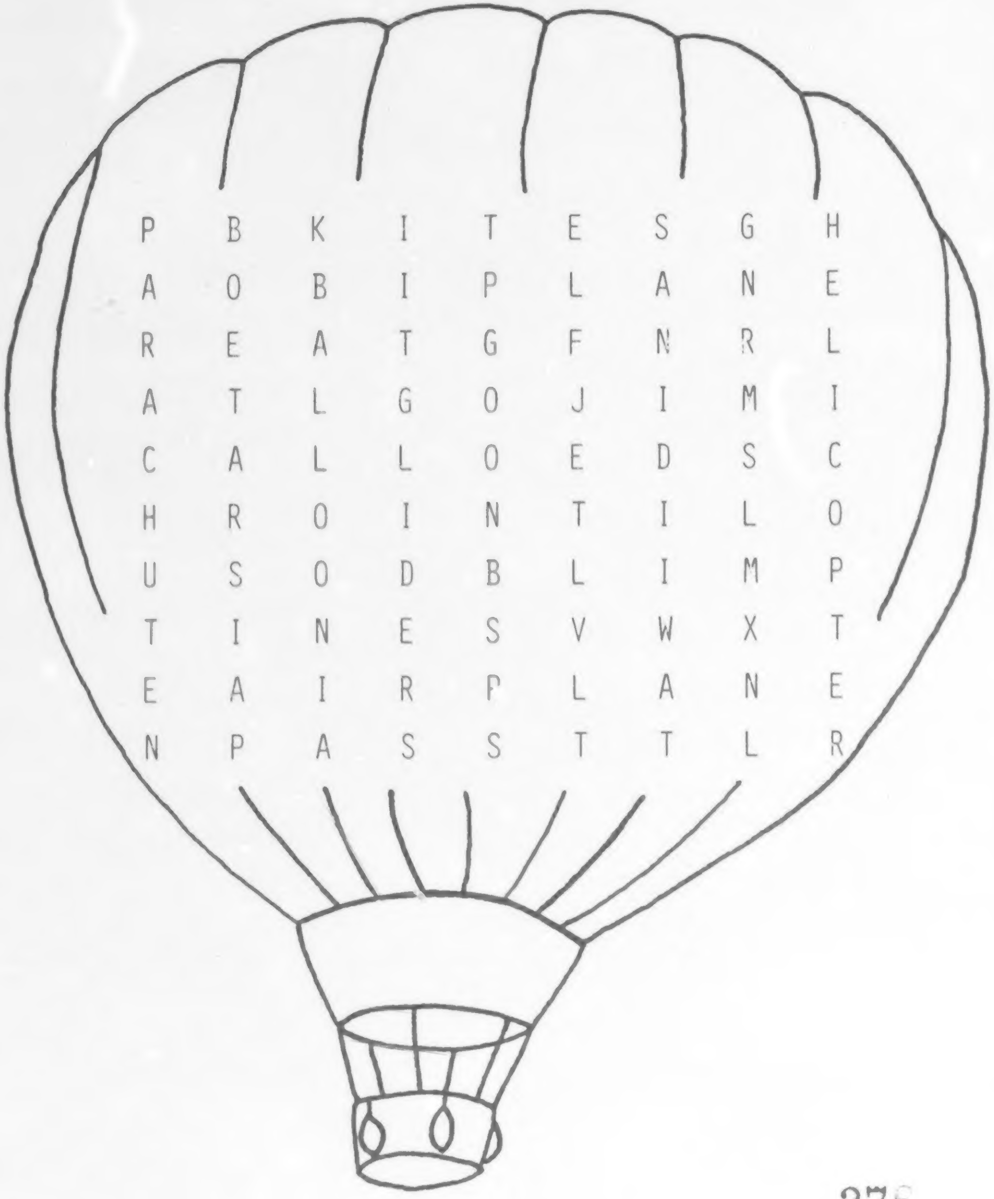
TITLE: Balloon In the Sky Search

GRADE LEVEL: 3-6

CURRICULUM AREA(S): Reading

Words related to balloons are hidden in the puzzle. They may be either across or down. Can you find all the words listed?

BALLOON
BLIMP
HELICOPTER
BIPLANE
PARACHUTE
GLIDERS
KITES
JET
SST
AIRPLANE



P	B	K	I	T	E	S	G	H
A	O	B	I	P	L	A	N	E
R	E	A	T	G	F	N	R	L
A	T	L	G	O	J	I	M	I
C	A	L	L	O	E	D	S	C
H	R	O	I	N	T	I	L	O
U	S	O	D	B	L	I	M	P
T	I	N	E	S	V	W	X	T
E	A	I	R	P	L	A	N	E
N	P	A	S	S	T	T	L	R

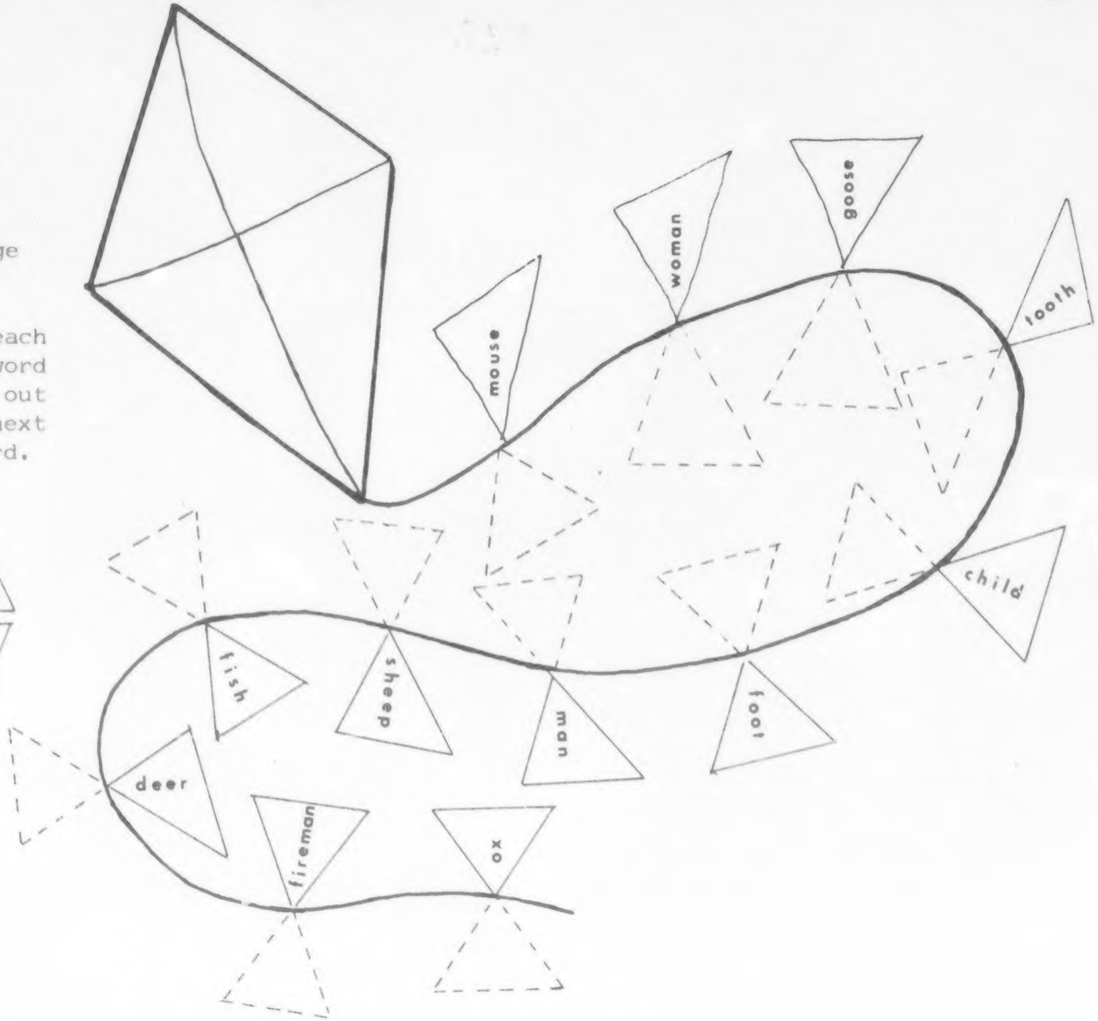
SOURCE: High Flight - Aerospace Activities, K-12, OK: State Department of Education, 1982.

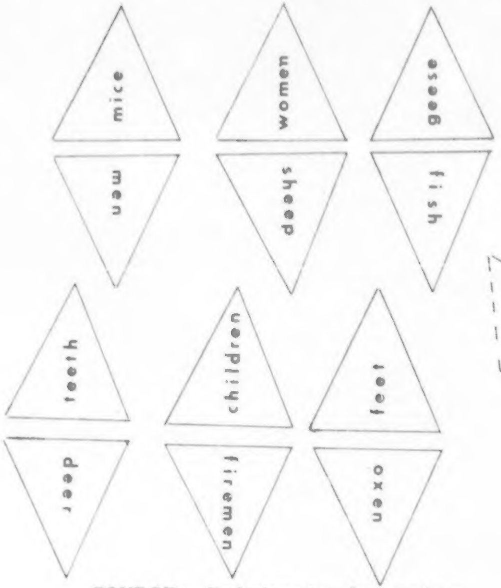
TITLE: High-Flying Plurals

GRADE LEVEL: 1-3

CURRICULUM AREA(S): Language Arts

Read the singular word on each kite bow. Read the plural word on each low-half below. Cut out the plurals and paste them next to the correct singular word.


mouse
woman
goose
tooth
child
fish
sheep
man
foot
deer
fireman
ox


mice
women
geese
men
sheep
fish
teeth
children
feet
deer
firemen
oxen

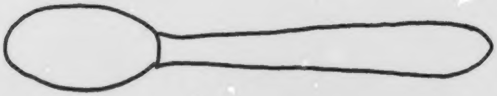
SOURCE: Celebrate Learning, Holidays in the Classroom, OK: State Department of Education, 1981.

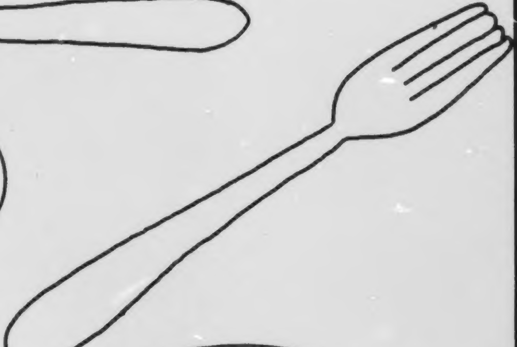
TITLE: Table Manners

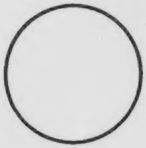
GRADE LEVEL: K-6

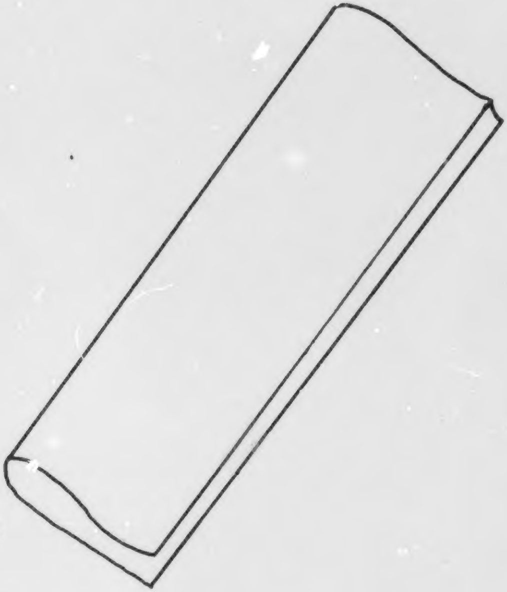
CURRICULUM AREA(S): Health

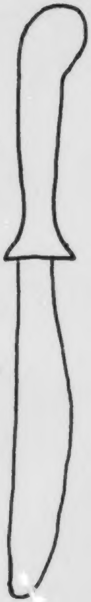
Cut out the items on this page. Glue then on another page as they would be arranged on a table.

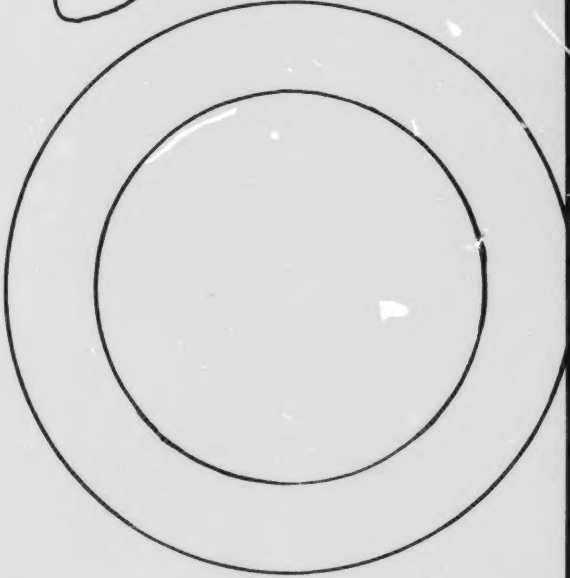




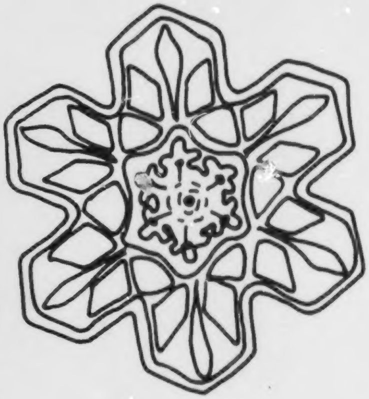








SOURCE: Kids & Manners: A Ticket to Success, OK: State Department of Education, 1981.



T, V, A

Activities

TITLE: Are You Listening?

GRADE LEVEL: K-4

CURRICULUM AREA(S): Art, Reading

You will need a large sheet of paper, pencil and crayons.

Give students directions orally. Ask students to fold paper in half, then fold again. Give directions similar to example. Gradually increase difficulty as students progress.

Draw 4 balls.

Color them blue.

Draw 3 hats.

Color them red.

Draw 1 tree.

Color it green.

Draw 2 houses.

Color them yellow.

SOURCE: Reading Sampler, OK: State Department of Education, 1980.

TITLE: Write-A-Word

GRADE LEVEL: 1-6

CURRICULUM AREA(S): Reading, Spelling

You will need blank cards, pen and glue.

Identify words to work on.

Write or print words on cards.

Trace over letters with glue and let dry. Repeat until several layers have accumulated.

Have student, using a finger, trace over the words, saying each letter as he/she traces and pronouncing the word when he/she finishes.

Repeat as necessary.

Note: Keep Dolch word list for future reference; therefore duplication can be reduced.

SOURCE: Jacque Allen, RESC, Anadarko, OK.

TITLE: Short Vowel Sounds

GRADE LEVEL: 2

CURRICULUM AREA(S): Language Arts

Give the child the vowel cards and ask him/her to say each short vowel sound. If the child is uncertain of any short vowel sound, set the card aside for further instruction.

Select one of the short vowels on which the child needed further practice. Show the letter card to the child and say its short vowel sound.

Have the child write the letter on the chalkboard approximately 3 inches tall and repeat its short sound with you.

Using regular chalk or colored chalk have the child trace over the letter and repeat its sound several times.

Give the child a cup of water. Say a short vowel word and isolate the vowel sound (e.g., cat, /a/). Have the child repeat the word, then dip two fingers in the water and write the vowel on the board, saying the short sound as he/she writes.

Put several vowel cards on the table, including the card just studied. Have the child pick up the card, hand it to you and tell you its short vowel sound.

At a later time follow the same procedure for other short vowel sounds as needed. Eventually the child should be able to pick up each of the vowel cards and say its short sound without prompting.

ă	ĕ	ĭ	ŏ	ŭ
act	bend	hit	box	bump
back	get	itch	drop	cut
bat	left	lift	hop	hug
fast	mess	pick	hot	mud
hand	next	spin	knock	rub
ran	step	swim	sock	run
stand	went	win	stop	stuck

SOURCE: Used with permission from Teaching Reading Skills, Grade Two. Copyright 1981. Zaner Bloser, Inc., Columbus, Ohio.

TITLE: Multiple Meanings of Words

GRADE LEVEL: 2

CURRICULUM AREA(S): Language Arts

On index cards write words having multiple meanings. Make another set of cards for teacher use, each card containing the various meanings of each word card. Definitions can be written out or illustrated in pictures. Give several word cards to the child. Have him/her pronounce each word, then spread the cards out in front of him/her.

Begin reading the meanings or describing the pictures for one of the words. When the child knows which word you are defining he/she should say the word aloud and show you the corresponding word card. Give him/her the definition card to place with the word card.

Continue until all the words and meanings are matched. Have the child say the words and review each of their meanings one more time.

This may be structured for a small group activity by distributing one word card to each child. Each child should read his/her word aloud. Have the children listen as you read definitions. The child with the word that matches the definitions should say the word aloud for the others to hear. At the end, have each child say his/her word and remind the others of each of its meanings.

bark - outer covering of a tree; sound a dog makes
bill - paper money; beak of a bird
block - part of a city with four streets around it; solid square piece of wood
bow - thing that shoots arrows; a way to tie with two or more loops
can - to know how to; a metal container
cold - opposite of warm; a common illness
check - a mark; to look over; an order from a bank for money
drop - a small amount of liquid; to fall
fall - season after summer; to drop or come down
fly - insect; to go through the air
glasses - cups for drinking; things to help eyes see
hand - part of body at end of arm; pointer on a clock
hard - not soft; difficult
kind - gentle; good to others; type or sort
left - opposite of right; past tense of leave
letter - one of the alphabet; a written message sent by mail
light - opposite of heavy; what we see by; not dark
like - to be fond of; similar or the same as
match - thing that starts fires; to go together with or thing that is equal to another
mean - not nice; to intend or have in mind
note - a short letter or message; a musical sound
place - to put; a location, part of space, where something is
right - opposite of left; correct or true
ring - a circle-shaped band of metal; sound like a bell
roll - to turn over and over; to move on wheels; kind of bread
tie - to fasten with string; to have the same score
top - a toy; part that covers jar, box, etc.; opposite of bottom
trunk - main part of tree; elephant's nose; box for storing things; part of a car
watch - to look at; time piece worn on wrist

SOURCE: Used with permission from Teaching Reading Skills, Grade Two. Copyright 1981. Zaner-Bloser, Inc., Columbus, Ohio.

TITLE: Motivation Through Listening

GRADE LEVEL: 5-6

CURRICULUM AREA(S): Language Arts, Music

Pick out the most popular records that are currently playing. Make a unit of listening skills that you want to reinforce. For example: contractions, vocabulary, initial consonants, listening comprehension, synonyms, antonyms, proper nouns, common nouns, vowel identification and rhyming words.

Crossword puzzles, hide-a-word, comprehension worksheet, listening comprehension, finding the missing vowels and alphabet practice.

Example 1 - Listen to the record "Keep on Lovin' You" and write down as many contractions as possible. On a worksheet, name the two words the contractions stand for and name the missing letters.

Should've	Should have	h, a
I'm	I am	a

Example 2 - Listen to "Devil Went Down to Georgia." A worksheet that has preciously been reproduced has a list of words with only the consonants listed. The children listen to the record and put in the vowels.

G _ _ rg _ _   m _ _ n _ _ n
D _ v _ l   f _ ng _ et _ ps
l _ _ king   J _ hnn _

Example 3 - Listen to the record "Cryin'" by Dan McLean and have the students count the number of times they hear the word "cryin'". As each child finishes counting, she/he is to write the numeral representing the total. Using that numeral as the starting point for a drawing, she/he illustrates the main idea of the lyrics.

SOURCE: Reading Sampler, OK: State Department of Education, 1980.

TITLE: How Do We Live at School?

GRADE LEVEL: K-3

CURRICULUM AREA(S): Art, Health, Language Arts, Social Studies

Make a chart with two sides titled "Living at School/Living at home." Let children volunteer things they do both at home and at school, e.g., wash hands, use restroom, read books, eat, brush teeth, rest, play.

Make or cut out pictures of each activity and place on the chart side by side under home and school.

Discuss their favorite parts of the school building and grounds. Write a language experience story about the favorite part of the school. (Encourage children who can write to compose their own stories). Make pictures to accompany the story or individual stories. Arrange on a bulletin board.

SOURCE: Classroom Learning Activities for Social Studies (CLASS), OK: State Department of Education, 1982

James and the GIANT PEACH

T V A

TITLE: Fruit Punch

GRADE LEVEL: 4-6

CURRICULUM AREA(S): Science

Talk about the fantasy in stories. Have the students write their own stories about themselves and a giant fruit.

Peel several fruits and observe which ones turn brown.

Show how to prevent fruit from turning brown by using lemon juice. Find out why.

Discuss the nutritional value of fruits. Compare the cost of snacks that are nutritional with those that are not. Plan after school snacks for a week keeping in mind nutrition, cost and variety.

SOURCE: Mix, Stir, Blend . . . A Pantry of Cooking Activities, OK: State Department of Education, 1981.

T V A

TITLE: Animal Interview

GRADE LEVEL: 2-5

CURRICULUM AREA(S): Language Arts, Science

First day: Have students choose an animal that interests them and find out as much as possible about it. They should write notes based on observation and use of the encyclopedia. Habits, diet. enemies, relatives and usefulness to man should be included in the interview.

Second day: Ask students to pretend the animal can talk, and write what the animal would say, using their notes. This can be humorous or informative.

Third day: Students present their interviews to the class.

SOURCE: Spectrum of Ideas - Activities for Teaching Effective Writing, Listening and Speaking Skills, OK: State Department of Education, 1931.

TITLE: A Vowel in a Syllable or Word Ending in "e" is Usually Long

GRADE LEVEL: 3

CURRICULUM AREA(S): Language Arts

On the chalkboard write the words "plane," "these," "time," "note," and "flute."

Say each word and have the child repeat it. Ask the child what vowel sound he/she heard in each word.

Have the child make each long vowel sound then place the long diacritical mark over the first vowel in each word.

Ask the child to tell you how each word ends. Tell the child the rule: a vowel in a syllable or word ending in "e" is usually long.

Have the child repeat the rule.

Refer again to the words on the board. Have the child repeat each word, tell you what the final letter is and the vowel sound.

On the chalkboard write a final "e" word drawing blank lines in place of the first vowel and final "e" (see list). Say the word and have the child repeat it. Ask him/her to tell you what long vowel was heard and what two letters will fill in the blanks.

Repeat above step with other words until the child seems secure.

ā	ē	ī	ō	ū
ape	these	bike	chose	cube
flame		dime	cone	cute
gave		hide	drove	flute
late		mine	joke	huge
name		side	note	mule
plane		slide	stone	rule
shake		time	throne	tune
take		write	wrote	use

SOURCE: Used with permission from Teaching Reading Skills, Grade Three. Copyright 1981. Zaner - Bloser, Inc., Columbus, Ohio.

TVA

TITLE: Long Vowel Sounds - Words Ending in "e"

GRADE LEVEL: 1

CURRICULUM AREA(S): Language Arts

Cut and write out word strips with a short vowel word on the left and the word with the final "e" on the right (see example at end of activity).

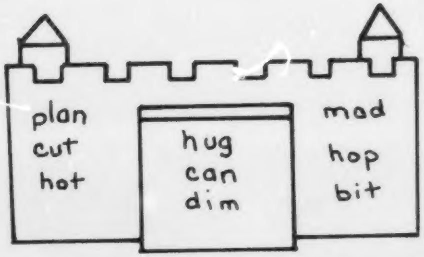
Give the child the word strips one by one. Have the child listen as you pronounce one of the words and ask him/her to repeat the word and point to the correct word on the strip. If he/she has any difficulty, pronounce both words and have the child repeat them. Point out the rule of the final "e".

On the chalkboard (or on a sheet of paper) draw an outline of a castle. Within the outline write words which can be made long by adding a final "e".

Explain that some of the words in the castle are under the spell of a magical "e" and others are not. You will say a word (giving either the long or short vowel pronunciation). The child is to listen to you and decide which vowel sound he/she hears. If the word is under the spell of the magical "e" then the child indicates such by adding the final "e".

at - ate
cap - cape
hat - hate
rat - rate
tap - tape
rob - robe
rod - rode
us - use

fin - fine
hid - hide
kit - kite
pin - pine
rid - ride
cub - cube
tub - tube



SOURCE: Used with permission from Teaching Reading Skills, Grade One. Copyright 1981. Zaner-Bloser, Inc., Columbus, Ohio.

T V A

TITLE: Identifies Numerals 1-10

GRADE LEVEL: K-2

CURRICULUM AREA(S): Math

Teach the child the rhyme:

One, two,
Buckle my shoe;
Three, four,
Shut the door;
Five, six,
Pick up sticks;
Seven, eight,
Lay them straight;
Nine, ten,
Do it again.

When the child has memorized the rhyme, show him/her the number cards. Place the cards in sequence face up on the table. Have the child say the rhyme and point to the card as each numeral is said.

Call out one of the numerals at random. Have the child look at the cards to find the numeral, point to it and name it. If the child has difficulty, have him/her repeat the rhyme while pointing to each numeral until she/he reaches the one you asked for.

When the child seems secure, shuffle the cards and place them in a stack face down on the table. Have him/her turn over one card at a time and name the numeral.

SOURCE: Used with permission from Teaching Reading Skills, Readiness Level. Copyright 1981, Zaner - Bloser, Inc., Columbus, Ohio.

T V A

TITLE: Learning States and Locations

GRADE LEVEL: 4-6

CURRICULUM AREA(S): Art, Music, Social Studies

Step 1: Divide States into groups (New England, Midwest, etc.) and color code them.

Step 2: (Auditorily) Make a sing-song of each group to the tune of "Them Bones" (example: Oklahoma's connected to Texas and Texas is connected to New Mexico and so on ..."and here is the U.S.A.").

Step 3: As each student can successfully identify each state correctly, they can assemble pieces of a salt map (or can use dyed rice) and upon completion have a colored picture of the U.S.A.

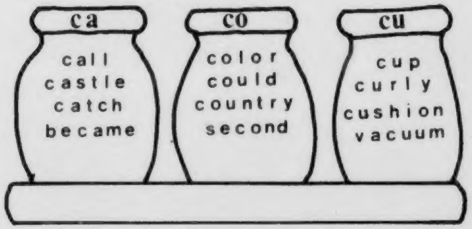
SOURCE: Jacque Allen, RESC, Anadarko, Oklahoma.

TITLE: Two Sounds of "C" and "G"

GRADE LEVEL: 3

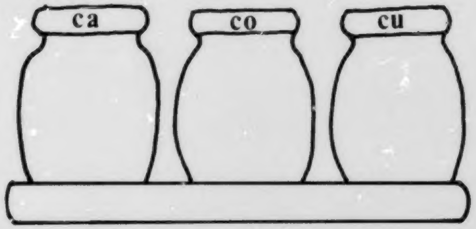
CURRICULUM AREA(S): Language Arts

On the chalkboard draw three large jars on a shelf. Jars should be large enough to have four words written within. Label the lids on the jars "ca, co, cu." Draw another three jars on a shelf and label "ce, ci, cy." Write twenty-four words in random order on the board, four of each "c + vowel" combination (see list).



Have the child look at each word on the list and write it in the appropriate jar according to its "c + vowel" spelling.

After all the jars are complete, have the words in the first three jars pronounced. Ask what sound the "c" made. Have the child write /k/ on the shelf. Do the same with the second set of jars, labeling the shelf /s/.



Ask the child to point to the vowels giving "c" the sound of "k". Write the generalization on the board: when "c" is followed by "a, o, or u," the "c" makes the sound of /k/.

Ask the child to point to the vowels giving "c" the sound of /s/. Write the generalization: when "c" is followed by "e, i, or y," the "c" usually makes the sound of /s/.

Follow the same procedure to work on the sounds of "g". With the "j" sound of "g" you may want to point out some common exceptions - words where "g" followed by "e" or "i" makes the sound of /g/ (e.g., get, gear, geese, girl, gift, giggle, give).

ca	co	cu	ce
call	cold	cup	cereal
came	color	curve	cent
castle	cocoa	curly	ceiling
calendar	corner	curtain	center
catch	could	cushion	certain
because	country	cut	fence
became	record	vacuum	mice
locate	second	cucumber	place

ci	cy	ga	go
city	bicycle	game	going
circus	cyclone	gate	gone
circle	fancy	gallon	gold
cider	icy	gas	goose
decide	cymbals	gave	gobble
racing	cycle	garden	gorilla
pencil		again	dragon
icing		sugar	wagon

gu	ge	gi	gy
gum	gem	giant	gym
guess	gentle	giraffe	gypsy
guard	George	ginger	stingy
guitar	general	magic	dingy
guide	germ	engine	Egypt
guest	page	imagine	
gulf	edge	fragile	
August	danger	gigantic	

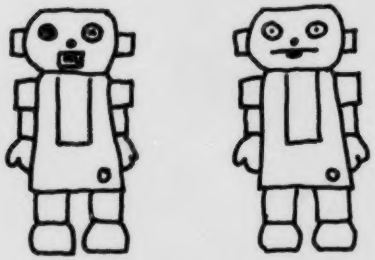
SOURCE: Used with permission from Teaching Reading Skills, Grade Three. Copyright 1981. Zaner, Bloser, Inc., Columbus, Ohio.

TITLE: When There Are Two Vowels Together the First Is Long and the Second is Silent

GRADE LEVEL: 2

CURRICULUM AREA(S): Language Arts

Ask the child to draw two robots at the top of his/her paper, the first one with its mouth open, the second with its mouth closed. Tell the child that the first robot is talking; the second one must remain silent.



Have the child write the word "rain" on his/her paper. Have him/her identify the first vowel, say its name and draw a box around it with a red crayon. The box indicates that it is speaking.

Have the child draw an "X" through the second viwel with a pencil to indicate that it is silent.

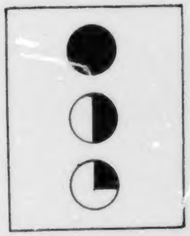
Ask what sound the first vowel is going to make and have the child read the word.

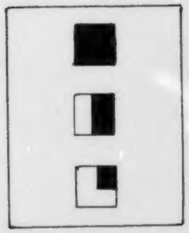
Continue in the same manner with other double vowel words.

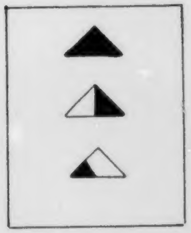
When the child seems secure, add diacritical marks to the activity. Have the child use a red crayon to write the long vowel diacritical mark over the first vowel instead of drawing the box, and continue using a pencil to mark an "X" through the second vowel.

ai	ay	ea	ee	oa	oe	ue
chain	day	bean	cheese	boat	doe	blue
main	may	each	feet	coat	hoe	clue
paint	say	leaf	keep	goat	toe	glue
rain	stay	neat	see	load		true
raise	tray	please	street	road		
wait	way	read	tree	soap		

SOURCE: Used with permission from Teaching Reading Skills, Grade Two. Copyright 1981. Zaner-Bloser, Inc., Columbus, Ohio.







TITLE: Comprehend Meaning of Whole, Part, Half

GRADE LEVEL: K-2

CURRICULUM AREA(S): Math

On a piece of paper draw three circles; color one completely, color half of the second and color one-quarter of the third. On separate pieces of paper draw three circles, three squares, three triangles and other shapes. On each sheet draw a line through the second shape dividing it in half, and draw a line through the third dividing it into one small part and one large part.

Put the two sheets with circles (one sheet colored in, one not) on the table in front of the child. Point to the colored-in circle and say, "This whole circle has been colored. Color your whole circle."

Point to the next circle and say, "Half of this circle has been colored. Color half of your circle."

Point to the last circle and say, "A small part of the circle is colored; a large part is not colored. Color a small part of your circle."

Continue in this manner using other shapes.

When you have worked on several shapes, take the sheets the child colored in and cut the shapes apart. Mix the pieces on the table.

Ask the child to find all the pieces that show the whole shape colored in. Repeat for all the pieces that show half the shape colored in, then part of the shape colored in.

SOURCE: Used with permission from Teaching Reading Skills, Readiness Level. Copyright 1981. Zaner-Bloser, Inc., Columbus, Ohio.

T V A

TITLE: Energy Conservation

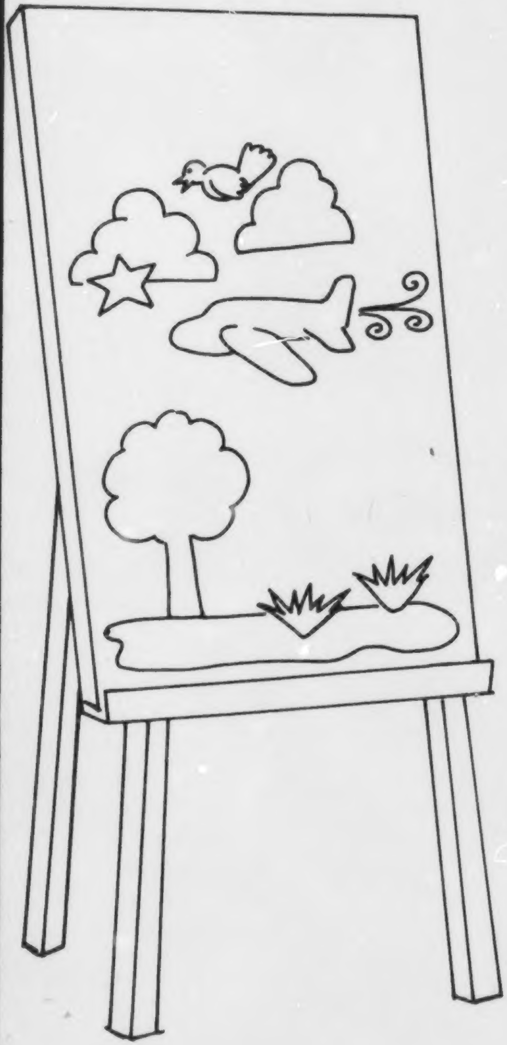
GRADE LEVEL: 2

CURRICULUM AREA(S): Science

For the kinesthetic learner:

A lollipop may be used to introduce the lesson on conservation. Hold up a lollipop and ask: What would happen if I took a bite out of this lollipop, then ask if I kept taking bites? (It would be eaten up--all gone) What if I licked it and kept licking it for a long time? (The result would be the same, but it would take longer.) Allow plenty of time for the children to grasp this concept . . . Additional questions may be asked: What would happen if I did not bite and eat all of the lollipop? (You would have some for later.) Suppose this were not a lollipop, but stood for something else? Something you would not want to eat, but something you use all the time. Suppose a magician changed this lollipop into gas, oil or a piece of coal, how could I make sure I would have some left for tomorrow? (Use it more slowly.) Can anyone think of a big word that means to make something last longer? Write the word "conserve" on the chalkboard and allow plenty of time for children to look at the word. Ask students to use the word in a sentence. Develop the concept of energy conservation by introducing the lollipops, one per student.

SOURCE: Angie Roberds, Phillips University, Enid, Oklahoma.



T V A

TITLE: Where Am I?

GRADE LEVEL: K-2

CURRICULUM AREA(S): All

Using a flannelboard and cutouts, the teacher will give the following oral directions.

1. Place the airplane in the MIDDLE of the flannelboard.
2. Place the two clouds ABOVE the airplane.
3. Place the bird BETWEEN the clouds.
4. Place the wind BEHIND the airplane.
5. Place the star IN FRONT of the clouds.
6. Place the grass UNDER the airplane.
7. Place the ground near the BOTTOM of the flannelboard.
8. Place the tree ON the ground.

SOURCE: High Flight - Aerospace Activities, K-12, OK: State Department of Education, 1982.

T V A

TITLE: Illustrating Classics

GRADE LEVEL: 5-6

CURRICULUM AREA(S): Art, Reading

Students listen to tapes of books making illustrations at intervals. Comparison is made of students' illustrations and trade book illustrations.

SOURCE: Metamorphosis, OK: State Department of Education, 1982.

T V A

TITLE: Double Vowels With Irregular Sounds

GRADE LEVEL: 1

CURRICULUM AREA(S): Language Arts

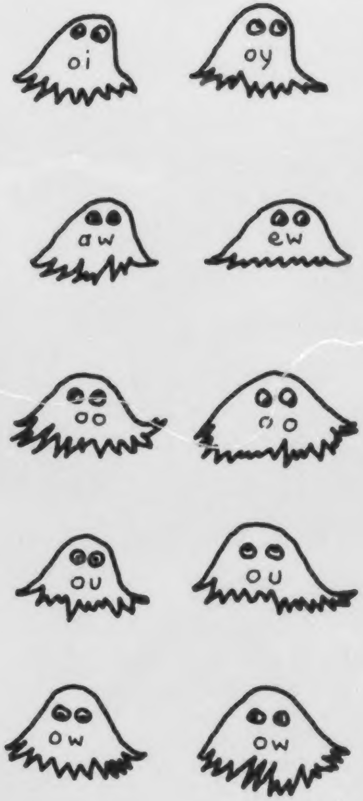
Make word cards for double vowel combinations oi, oy, ow, ou, oo, aw, ew (see lists). For the vowel combinations that make two different sounds write the two sounds in contrasting colors. Then, on the chalkboard draw ten "Mophead" figures. Within four write oi, oy, aw, ew. In the remaining six write oo, ou, ow, twice each. Use the same contrasting colors for the two different sounds as used on the word cards.

Point out each "Mophead," its vowel combination, and vowel sound. Review the different sounds made by oo, ou, and ow (/o͝o/ as in look, /o͞o/ as in boot; /ou/ as in house, /o͝o/ as in could; /ow/ as in cow, /ō/ as in show.)

Below each mophead write a word for its vowel sound (see lists). Have the child look at each word, say it aloud and underline the special vowel spelling. He/she should use the appropriate contrasting color of chalk to underline the different sounds of oo, ou, ow.

Give the child a set of word cards. Ask him/her to pronounce each word and then set the card on the chalkledge beneath the word with the same vowel pronunciation and spelling. Continue with other words in the same manner, stressing any combinations causing difficulty.

oi: join, noise, point, soil
oy: boy, enjoy, joy, toy
ow: brown, clown, down, now, town
ow: blow, grow, know, own, snow
aw: draw, lawn, saw, straw, yawn
oo: book, foot, good, took, wood
oo: choose, moon, noon, root, soon
ou: cloud, count, mouth, out, round
ou: could, should, would
ew: chew, dew, few, new, screw



SOURCE: Used with permission from Teaching Reading Skills, Grade One. Copyright 1981. Zaner - Bloser, Inc., Columbus, Ohio.

T, A
Activities

TITLE: Handwriting

GRADE LEVEL: K-6

CURRICULUM AREA(S): Language Arts

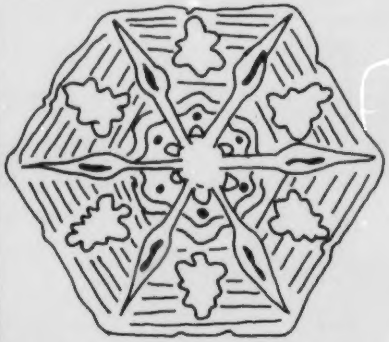
Handwriting can be taught efficiently to the auditory learner. There are some cautions, however, that can make this task much easier.

1. Visual models, the mainstay of handwriting education, do not work well with auditory learners when they are presented alone. These students do not pay close attention to visual cues, and as a consequence, fail to note the salient characteristics of each letter. Be sure to accompany written models with descriptions of the strokes involved. For example:

   > The letter is lower-case "h". Begin at the headline, pull down straight to the baseline; retrace, curve forward and up to the midline, curve down, and pull down straight to the baseline.

2. Be consistent in the language you use to describe letters, strokes, line quality and so on. Nothing is more frustrating to the person who depends upon auditory cues than having these cues change whimsically.

SOURCE: "Teaching Handwriting through Modality Strengths," Copyright 1980 Zaner-Bloser, Inc., Columbus, Ohio. Reprinted by permission.



V/V, A

Activities

TITLE: Activities That Appeal to Learning Strengths

GRADE LEVEL: K-6

CURRICULUM AREA(S): All

1. Encourage learning of spelling words by looking at word, closing eyes and visualizing what the word looks like; write the word.
2. Use flash cards to learn math facts.
3. Use flash cards to learn sight words.
4. Try writing notes instead of giving verbal instructions.
5. Encourage the older student to underline in color, key points in notes they've taken or in their own books.
6. Use timelines in History and Social Studies to show sequence of events.
7. Use a "look/say" approach to teaching reading rather than a phonetic one.
8. Use a tachistoscope to teach vocabulary.
9. Cut comic strips apart and arrange in order to teach sequencing.
10. In teaching percent, use graph paper so student can "see" amounts.
11. Have students follow diagrams to construct Tinker Toy projects.
12. Play "I Spy."
13. Have students repeat bead pattern designs from flash cards.
14. Use "hidden pictures."
15. Have students make their own picture dictionaries.
16. Use "search-a-word" puzzles.
17. Place a list of daily instructions on the board rather than telling them.
18. Repeat geometric pattern designs from flash cards using parquetry blocks.
19. Encourage older students to outline passages to study.
20. Teach younger students to use a "cluster" design outline.
21. Use filmstrips, films and transparencies in teaching.

SOURCE: Carol Ashmore, Classroom Teacher, Kirkland Elementary School, Putnam City Public Schools.

TITLE: Handwriting

GRADE LEVEL: K-6

CURRICULUM AREA(S): Language Arts, Handwriting

Children with a visual modality strength are often neat writers simply because they attend closely to their product. There is no guarantee, however, that a visual child will be a good writer. If you keep the following points in mind, you can increase the probability that a child whose strongest modality is vision will reach his/her potential in penmanship.

1. Be sure that the model you use is appropriate. The visual child is quick to notice subtle differences in a visual display. If writing is to serve as a model for the visual child, be sure it is done correctly.
2. A large model displayed in the front of the room is a good means by which to point out the characteristics of a correctly formed letter. Even better, however, is a model that the visual child can use at his/her desk. A near model can be referred to quickly and can be inspected more closely.
3. Be consistent in the models that you use. Letter shapes vary somewhat among handwriting programs. If you are not visual, you might not notice the difference, but your visual students will. Inconsistent models will result in inconsistent performance on the part of visual learners.

SOURCE: Brochure #10, "Teaching Handwriting through Modality Strengths," Zaner-Bloser, Inc., Columbus, Ohio, 1980. [Reprinted by permission.]

TITLE: Cattle Drive

GRADE LEVEL: 4-6

CURRICULUM AREA(S): Language Arts, Social Studies

Investigate the job opportunities on a trail drive. What were the duties and qualifications for trail boss, drover, cook, wrangler, etc.?

SOURCE: Oklahoma . . . OK, OK: State Department of Education, 1981.

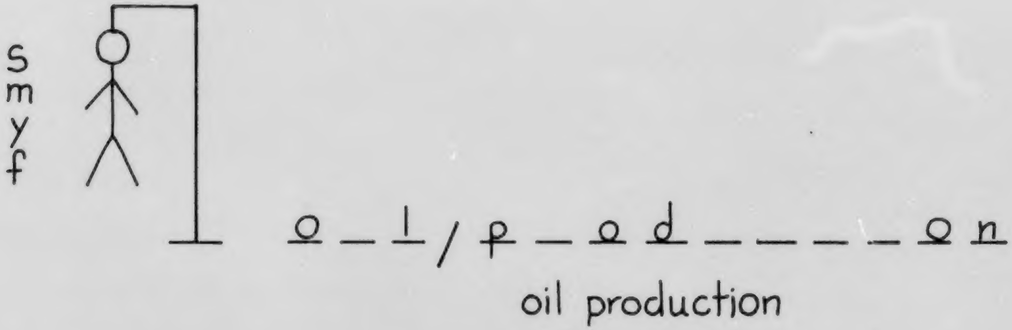
TITLE: Hangman

GRADE LEVEL: 3-6

CURRICULUM AREA(S): All

Use this activity for the end of a period when there are only two or three minutes of class time left. Using terms relating to a current lesson, play "Hangman" with the students. Use words from films, newspapers, or maps. Try to use vocabulary words or phrases that the students have seen or heard that day; e.g., "tributary," "cash," "cotton," "stock market," "representative," "space shuttle," etc. This quick game at the end of a class period can be used to reinforce a concept, and it encourages the students to focus on subject matter for the full class period.

Let the students provide the key sometimes instead of the teacher. There are only two rules: (1) the word or phrase must be relevant to the day's topics, and (2) half the letter spaces must be filled correctly before anyone may say the word. (This prevents a great deal of guessing and gives slower-thinking students a better chance of figuring out an answer.)



SOURCE: Classroom Learning Activities for Social Studies (CLASS), OK: State Department of Education, 1982.

TITLE: Teacher Suggestions

GRADE LEVEL: 1-6

CURRICULUM AREA(S): All

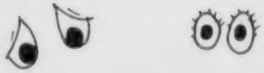
If the student is primarily an auditory learner, adjust the mode of presentation for the student by:

1. Giving verbal as well as written directions in assignments.
2. Taping important reading material for students to listen to as they read a passage. Tape only essential information. A teacher or another student might do the taping.
3. Putting assignment directions on tape so that students can replay them when needed.
4. Giving the student oral rather than written tests. The teacher or another student can do this.
5. Having students drill on essential information by using a tape recorder, i.e., reciting information into the recorder and playing it back.
6. Using published audio tapes with students.
7. Having students drill aloud to themselves or to another student
8. Dictating information into a recorder or to another student.
9. Having another student read important information to the mainstreamed student.
10. Having students read important information aloud to themselves or to another student.

If the student is primarily a visual learner, adjust the mode of primary presentation for the student by:

1. Having the student use flash cards printed in bold bright colors.
2. Having student close his/her eyes and try to visualize words or information in his/her head.
3. Providing visual clues on chalkboard for all verbal directions.
4. Having students write down notes and memos to themselves concerning important words, concepts, ideas.
5. Giving students written directions in assignments.
6. Allowing students to read information needed for assignments rather than relying on oral presentations.
7. Having students drill and study by the cover/write method.
8. Having a visual learner read to an auditory learner.
9. Allowing written reports or projects in lieu of oral presentations.

REMEMBER: Reinforce according to secondary learning style.



SOURCE: Child Demonstration Center, Cushing, Oklahoma.

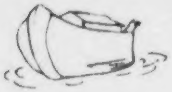
TITLE: Memorization

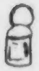
GRADE LEVEL: 4-6

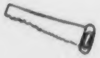
CURRICULUM AREA(S): Social Studies

Visual clues for visual learners.

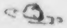
Arkansas







Little Rock

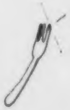


Auditory clues.

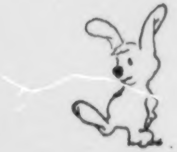
Noah looked out of the Ark-and-saw a small rock.

Visual:

New York



Albany



Auditory:

This state is like buying a new fork (rhymes) to eat all-the-bunny with.

These can be turned into games that would involve kinesthetic clues by asking children to play charades.

Students can be broken up into small teams and given four states to make clues about. Some of the states are easy and some are not. Try to assign some easy with the difficult.

SOURCE: Josie McClain, Sequoyah Middle School, Edmond, Oklahoma.

V A

TITLE: How Clouds are Formed

GRADE LEVEL: 2-3

CURRICULUM AREA(S): Science

To give children a better understanding of how clouds are formed, use the following demonstration

1. Using a hot plate, boil water in a kettle.
2. When the steam condenses, ask the children what they see.
3. Discuss water vapors and how they come together to form a cloud. Draw pictures on the board for visual children.
4. Ask the class if they have any ideas where the real clouds come from. Write their ideas on the board and discuss them.

NOTE: It is not wise for children to handle the materials.

SOURCE: Margaret Robison, Phillips University, Enid, Oklahoma.

V A

TITLE: Guess What!

GRADE LEVEL: 4-6

CURRICULUM AREA(S): Language Arts

To reinforce a story, poem or television program after a class discussion, write ten key words on the board. Using a stopwatch and pointing to each word at random, allow students to volunteer a sentence using the designated word. The sentence must respond to the story and be a complete sentence. Two sentences per word (one minute) may be required.

SOURCE: Spectrum of Ideas . . . Activities for Teaching Effec-Listening, Writing and Speaking Skills, OK: State Department of Education, 1981.

TITLE: Time Limits

GRADE LEVEL: K-3

CURRICULUM AREA(S): Social Studies

Provide self-correcting sequence cards for putting pictures in sequence to tell a story.

Prepare a pictorial calendar for the current month on a large bulletin board or piece of butcher paper. At the end of each school day, pin a three-dimensional object (preferably) or picture to that day's square to remember the day. Allow children to select the event which they feel was most memorable.

Use pictorial calendar when developing concept of yesterday. "What did we do yesterday?"

At the end of the school day, begin talking about tomorrow as a way to develop the concept.

Talk about the names of days (e.g., Monday).

Explain the number of days in a week.

Use the pictorial calendar frequently to review what we did a week ago. (This develops a feeling for how long a week is.)

Draw a picture on the calendar for each three-dimensional object at the end of the month. Save the pictorial calendar so you can periodically review what we did a month ago,

Explain that months also have names.

Ask children to bring photos of themselves about a year ago. Compare with now.

Discuss where they were a year ago, e.g., preschool, lived in another city, staying with sitter.

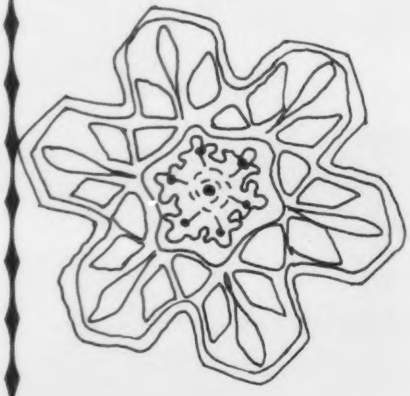
Explain that a year is named with a number.

Observe children's birthdays if they occur during the school year. If they fall during a vacation, either celebrate their half-birthday or let them choose when they want to celebrate it so the entire class can share.

SEPTEMBER

SUN	MON	TUE	WED	THU	FRI	SAT

SOURCE: Touching, Living, Growing . . . Elementary Social Studies, OK: State Department of Education, 1981.



A

Activities

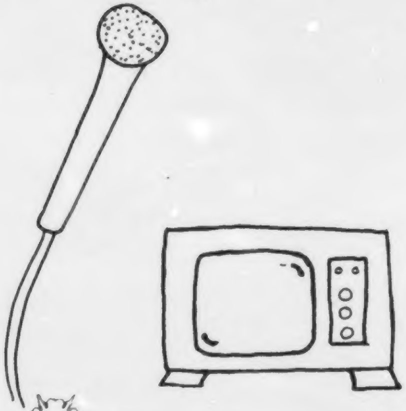
TITLE: Evening News

GRADE LEVEL: 4-6

CURRICULUM AREA(S): Journalism, Language Arts, Social Studies, Speech

For this activity you will need a table, chairs and a make-believe microphone. Choose a time period in American history and have students broadcast one day's news. Assign roles of newscaster, sportscaster, weather forecaster and others. Plan the program to include timely commercials, then present the news cast to the class. Suggested events include the Boston Tea Party, the signing of the Constitution, the attack on Pearl Harbor, the Louisiana Purchase, the assassination of a nationally important person, and significant battles and treaties.

SOURCE: Classroom Learning Activities for Social Studies (CLASS), OK: State Department of Education, 1982.



TITLE: Activities That Appeal To Learning Strengths

GRADE LEVEL: 1-6

CURRICULUM AREA(S): All

1. Encourage student to say new spelling words, repeat them, discuss orally.
2. Say two words with different endings, beginnings, middle vowel or middle consonants; have student indicate if words are alike or different.
3. Encourage students to tape lecture classes for later playback to study.
4. To teach multiplication facts, use the Hap Palmer "singing multiplication tables."
5. To teach auditory discrimination use L'eggs eggs or the metal 35mm film cans. Fill two cans each with: rice, popcorn, sand, flour, paper clips; have the child match pairs by sound.
6. Auditory children will enjoy stories read aloud; visual students will want to "see" the pictures.
7. Give child box of pictures. Have him / her arrange in pairs that rhyme.
8. Utilize songs and poems to learn. (Example: Alphabet song; 30 Days Hath September).
9. Have students interview each other and do write ups for English.
10. Auditory students will prefer hearing instructions and precise oral directions.
11. Auditory students will enjoy spelling bees.
12. Auditory students will do effective studying with friends.

SOURCE: Carol Ashmore, Kirkland Elementary School, Putnam City Public Schools.

TITLE: Behavior

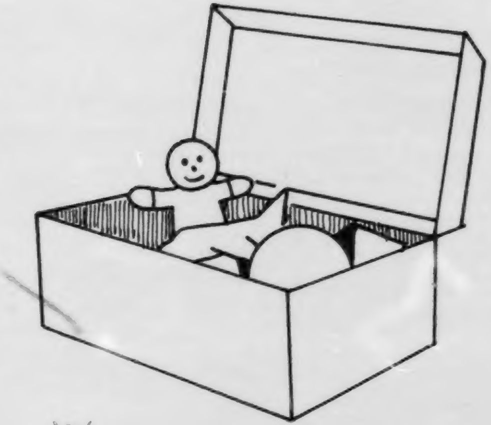
GRADE LEVEL: K-2

CURRICULUM AREA(S): Health, Language Arts, Social Studies

Read a book about a character who broke rules, e.g., The Story about Ping by M. Flack & K. Wiese (Viking), The Poky Little Puppy by J. Lowrey (Golden Press), The Tale of Peter Rabbit by B. Potter (Warne), Where the Wild Things Are by M. Sendak (Harper). Discuss the consequences of each story character's behavior.

SOURCE: Touching, Living, Growing. . .Elementary Social Studies, OK: State Department of Education, 1981.

325



TITLE: Listening Skills

GRADE LEVEL: K-2

CURRICULUM AREA(S): Reading

1. Record player playing softly while working.
2. "What made that noise?"

   Take child for a walk; when you hear a noise, ask "What made that noise?" Locate sound--from which direction did it come?
3. When correcting speech, just say the correct word to the child. Such as, if the child calls a dog a cat, don't say, "No, that's not a dog"--just say, "That's a cat." Let the child hear the correct sound.
4. Labeling:
   a. Tell the child the name, "Horse."
   b. Have him/her repeat the name while looking at the horse, "Horse."
   c. "Which animal is the horse?" Child points or in some way identifies.
   d. "What is that?" Child answers, "That is a horse."
5. Box with objects - The child holds up an object and says, "This is a ______." "I have a ______." Later you can use pictures. Later yet, the child describes and you must identify. "You have a _____." "It is a _____."

SOURCE: Reading Sampler, OK: State Department of Education, 1980.

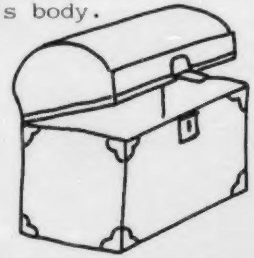
326

TITLE: Grandmother's Trunk

GRADE LEVEL: 3-6

CURRICULUM AREA(S): All

1. Grandmother's trunk (memory). "In my grandmother's trunk I found a _____." Second person must remember what first person found and say it in a sentence then add another thing. Next person repeats the first two items, "Then a _______, a _______, and a _____." Stop with eight items to begin with.
2. Prepositions: up, down, on, under, in, beside, above, below. Prepositions can be taught at the table by moving a spoon to show positions. Remember position should be relative to child's body.



SOURCE: Reading Sampler, OK: State Department of Education, 1980.

TITLE: What Is It?

GRADE LEVEL: K-6

CURRICULUM AREA(S): Music, P.E., Reading

Ask student to close his/her eyes. Make familiar sounds and ask him/her to identify each one. Try the following sounds:

knock on wood, clap your hands, crush a piece of paper, drop a pin. Later, let the student find a partner and practice additional sound identification on his/her own.

KNOCK
KNOCK

SOURCE: Reading Sampler, OK: State Department of Education, 1980.

Inventories

Inventories

Barbe, Walter Swassing, Raymond	Swassing-Barbe Modality Index Instrument uses a matching-to-sample task. Testing measures modality strengths in the visual, auditory and kinesthetic areas. Zaner-Bloser, Inc., 612 North Park Street, Columbus, Ohio 43215.
Canfield, A. A. Lafferty, J. C.	Learning Style Inventory Self report instrument designed to develop instructional materials for whole class or individuals. For use with junior high through adults. Humanics Media, Liberty Drawer 7970, Ann Arbor, Michigan 48107.
Carbo, Marie	Reading Style Inventory Multi-choice questionnaire that identifies individual reading style preferences. Grades 1-12. Learning Research Associates, P.O. Box 39, Roslyn Heights, NY 11577.
Dunn, Rita Dunn, Kenneth Price, Gary	Learning Style Inventory (LSI) Self report instrument for grades 3-12. Designed to diagnose individual learning characteristics.
	Productivity Environmental Preference Survey Adult version of LSI. Contains 100 items. Price Systems, Inc., Lawrence, Kansas.
Fizzell, Robert	Schooling Styles Inventory Examines factors related to success and failure relative to style of school. Western Illinois University, Malcomb, IL.
Golay, Keith	Learning Pattern Assessment Designed to show that learning behavior depends on students' personality and classroom setting. California State University, Fullerton, CA.
Gregorc, Anthony	An Adult's Guide to Style Inventory used to identify two crucial sets of learning qualities. Tells how a person orders information and where a person's sense of reality is anchored. Gabriel Systems, Inc., P.O. Box 357, Maynard, MA 01754.

Hill, Joseph	Cognitive Style Inventory Self report instrument describing a person's style in process, assimilation and decision making. Elementary through adult levels. White Bear, MN.
Hunt, David	Teacher Assessment of Student Learning Style Test is based on students' reactions to specific teaching stimuli. Examines the conceptual level of development.
	Paragraph Completion Method (PCM) Examines student's conceptual level. Grades 6 through adult. Toronto, Ontario, Canada, M5S 1V6.
Kolb, David	Learning Style Inventory Self report instrument pulls on hereditary abilities and past experiences. Four basic learning modes are identified. Young adults. McBer and Company, Boston, MA.
McCarthy, Bernice	4MAT System: Teaching to Learning Styles with Right/Left Mode Techniques Inventory related to work of Paul Torrance, Anthony Gregorc, David Kolb and others. Excel, Inc., 600 Enterprise Drive, Suite 101, Oak Brook, IL 60521.
Mills, R. E.	Learning Methods Test Test designed to assess learning strengths and combinations of strengths in grades K-3. Children are taught through three reading methods. Ft. Lauderdale, FL.
Papalia, Anthony	Learning Modalities Inventory Inventory to be used by teachers to observe classroom behavior in seven different areas. Buffalo City, NY.
Perrin, Janet	Learning Styles Inventory - Primary Version Questionnaire for children K-12. Learning Styles Network. St. John's University, Grand Central Parkway, Jamaica, NY 11439.
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Glossary

Glossary

Accomodator: Changes made to adjust to conflicting information and/or ideas, to fit a situation.

Affective Interaction: To produce an effect, influence, modify - to produce a reciprocal effect.

Appositional: The information processing of the brain's right hemisphere in well laterized right handers.

Arts Education: Provides regular instruction in arts disciplines -- music, visual art, dance, drama, poetry. Students may select from a variety of arts curriculum offerings which accommodate sequential skill development, K-12.

Arts Education, Specialized: See Specialized Arts Education.

Arts in Education (AIE): A comprehensive program best achieved by a balance of these three components: [1] arts education; [2] arts in basic education; [3] specialized arts education.

Arts in Basic Education: The integration of arts experiences in an intentional way to develop concepts in all curriculum areas.

Assimilator: One who incorporates new ideas, the assimilation of current linguistic ideas into reading theory and practice.

Assymetrical: Lack of proportion.

Auditory: Hearing process.

Auditory Constructed: Hearing sounds not heard before.

Auditory Digital: Talking to oneself.

Auditory Remembered: Remembering sounds heard before.

Behaviorally Complex: Extreme withdrawal/ aggressiveness, negative behavior which interferes with learning and social adjustment.

Cerebral Dominance: The greater control of behavior by one hemisphere of the brain than by the other.

Cognitive Style: Modification of mental structures.

Convergent Thinking: The ability to analyze and integrate in order to infer reasonable conclusions or specific solutions from given information.

Converger: That which unites in a common interest or focus.

Corpus Callosum: A band of nerve tissue connecting the cerebral hemispheres of the brain.

Creative Thinking: The development of a new thought or artistic effort.

Creativity: Inventiveness, originality.

Damaged Learner: Very broad category but merits discussion. These students are physically normal, but damaged in self-concept, social competency, aesthetic sensitivity or intellect so that they systematically avoid learning, reject learning, fantasize, or pretend that they are learning. The damaged learner needs special attention and treatment.

Directionality: The ability to perceive spatial orientation accurately, as up - down, right - left, front - back.

Diverger: The ability to elaborate and expand in order to generate new ideas or alternative interpretations of given information.

Dominance: The superiority of one hemisphere of the brain over the other.

Eclectic Learner: May shift learning styles and function profitably, may find one or another style more beneficial, but can adapt to and benefit from others. Historically, these students succeeded in our institutions because they adapted themselves from classroom to classroom and used whatever style was most advantageous at the moment. Teachers tend to prefer such learners.

Emotionally Involved: Function best in a classroom in which the atmosphere carries a high emotional charge.

Emotionally Neutral: Emotional tone is low-keyed and relatively neutral, intellectual rather than emotional, teacher is more objective and helps students to move from emotional expression to intellectual understanding and analysis.

Explicitely Structured: Teacher makes explicit a clear, unambiguous structure for learning with limits and goals. (What is unacceptable is carefully stated.)

Grammatic Logic: Correctness in language usage according to prescriptive grammar.

Holistic/Gestalten: A teaching/learning process approach that emphasizes wholes of subject matter and the integration of parts with wholes.

Hyperactive: Impulsive, restless. Students are usually impulsive, distractible and restless, as a result may have difficulty in school learning tasks.

Impulsivity: The inability to restrain or reflect upon one's responses; the tendency to make hasty actions, as in speaking before thinking.

Incremental Learner: Step by step, specific to overview; "brick layer" possibly would benefit from contemporary programmed materials.

Intuitive Thinking: The process, or result of perception or recognition that is immediate and direct rather than subjected to reflective thought.

Intuitive Learner: One who does not follow traditional logic, chronology or step by step, can make meaningful and accurate generalizations from unsystematic gathering of information and experience. Work faster, but may need to retrace their thinking and make explicit evidence for their conclusions.

Kinesthetic: (Sense of touch) feeling emotion.

Learning Styles: Distinctive behaviors which serve as indication of how a person learns from and adapts to his/her environment.

Learning Theory: An analysis of the process of adaptation.

Linear: Programmed learning, student makes a response and checks its accuracy at the next step of the way, step by step, to a desired learning goal.

Modalities - Preference - Methodology: Sensory systems of receiving, processing and responding to sensation. Some learn better through the visual modality than through the auditory.

Perceptual: The extraction of information from sensory stimulation.

Phenomenological: Environmental demands placed upon individuals.

Propositional: Describes the brain's left hemisphere dominance for speaking, writing, calculation and related tasks.

Predictor: The ability of a reader to predict or foretell how a written work will develop and end.

Open-ended Structure: The student feels at home and learns best in a fairly open-ended learning environment. Overall structure is visible but divergence is allowed for exploration of other relevant but not pre-planned phenomena.

Readiness: Preparedness to cope with a learning task. A holistic concept, not one specific trait such as mental age, as is sometimes assumed.

Receptive: The action of the sense organs or cognitive systems which are responsive to incoming stimuli.

Sequencing: The following of one thing after another, a continuous or connected series.

Sensory Generalist: One who uses all or many of the senses in gathering information and giving and gaining insights. Some are even oversensitive, having all "antennae" out. This student may need help in blocking out some stimuli in order to make use of most relevant or desired learnings. They may need to function in a setting where some sensory deprivation is purposely arranged, e.g., use of a three-sided screen or study carrel.

Sensory Specialist: One who relies primarily on the sense (e.g., visual, auditory, kinesthetic, etc.) for the meaningful formation of ideas. While other senses are intact and functioning, one sense tends to dominate. Because the learner's "sensory specialty" is but a small segment, the shotgun presentation method is not particularly efficient and carries the danger of boredom due to repetition.

Simultaneously: Existing, occurring at the same time.

Spatial Localization: Existing or occuring in space.

Specialized Arts Education: Arts experiences specifically designed for the exceptional child (gifted/talented or handicapped) to meet their special needs.

Stringers: A style of learning that requires a systematic, methodical approach to any subject under study.

Symmetrical: Well proportioned, regular in form or arrangement of corresponding parts.

Syntax: The study of the structure of grammatical sentences in a language.

Synthesis: The combination of parts or elements, as material substances or objects of thought, into a complex whole.

Tactile (tactual): Providing information to the sense of touch, tangible.

Tonal Patterns: Harmonious effects of subtle use of light and shade, rather than by contrasts of color.

Verbal: Having to do with words, as verbal fluency.

Verbal Constructed: Relation of thought and word, thinking in words.

Visual: Having to do with the eyes or with sight, as a visual method, a visual interpretation.

Visual Remembered: Seeing images of things seen before, in a way they were seen before.

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Handbook for Secondary Social Studies Educators
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A Lifetime Experience
Metamorphosis
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Activities That Develop Student Independence	K-6	K,T,V,A	78
History Hang-ups	4-6	K,T,V	116

MUSIC (cont.)

	Grade	Modality	Page
Learning States and Locations	4-6	T,V,A	173
Motivation Through Listening	5-6	T,V,A	169
Musical Jugs	1-3	K,A	134
Ten Little Spacemen	K,T	K,T,V,A	74
What Is It?	K-6	A	196
Which Native Americans Lived in Oklahoma?	4-6	K,T,V,A	88

PHYSICAL EDUCATION

	Grade	Modality	Page
Body Actions	K-6	K,T	101
Body Awareness	K-3	K,T	100
Fitness-like Test	1-6	T,V	143
Home Activities for Parents of Preschool and Kindergarten Children	P-K	K,T,V,A	76
Jump Rope Chant	1-2	K,T,A	125
Musical Jugs	1-3	K,A	134
Ten Little Spacemen	K-2	K,T,V,A	74
What Is It?	K-6	A	196

READINESS

	Grade	Modality	Page
Follows Left-toRight Progression	K-2	K,T,V,A	89
Home Activities for Parents of Preschool and Kindergarten Children	P-K	K,T,V,A	76
Matching Words	K-1	T,V	137

READING

	Grade	Modality	Page
Are You Listening?	K-4	T,V,A	166
Balloon in the Sky Search	3-6	T,V	152
Book Report	5-6	K,T,V,A	85
Dippy Alphabet	K-1	T,V	149
Distinguishing Between "b" and "d"	1	K,V,A	130
Great Vowel Fly-in	3-6	K,T,V	108
Illustrating Classics	5-6	T,V,A	178

READING (cont.)

	Grade	Modality	Page
Learning Letter Sounds	K-1	T,V	138
Letter Match	K-1	T,V	137
Listening Skills	K-2	A	195
Matching Words	K-1	T,V	137
Rainbow Race	4-6	T,V	145
Recognizing and Writing Rhyming Words Visually	2	T,V	142
Rhythm	1-6	K,T,V,A	90
Spatial Relationships	2	T,V	146
Story Time	K-4	K,T,V,A	82
220 Dolch Basic Sight Words	3	K,T,V,A	80
What Is It?	K-6	A	196
Write-A-Word	1-6	T,V,A	166

SCIENCE

	Grade	Modality	Page
Animal Interview	2-5	T,V,A	170
Body Systems	6	K,T,V,A	80
Chain Gang Water Hauling Activity	4-6	K,T,V,A	90
Constructing A Contour Map	6	K,T,V	115
Does Shape Matter	K-2	K,T,V	122
Energy Conservation	2	T,V,A	177
From Forest to Cactus	6	T,V	150
Fruit Punch	4-6	T,V,A	170
Great Vowel Fly-in	3-6	K,T,V	108
How Clouds Are Formed	2-3	V,A	190
Leaf Printing	5-6	T,V	143
Mixing Colors	K-1	T,V	149
Pictures From Space	5-6	T,V	148
Planets	3	K,T,V,A	84
Pollution Mobiles	4-6	K,T,V,A	75
Pop Goes the Weasel	K-3	K,T,V	120
Prospective Detective	K-3	K,T,V,A	82
Skin Investigation	4-5	K,T,V	111

SCIENCE (cont.)

	Grade	Modality	Page
Solar System Play	3-6	K,V,A	128
Stable vs. Unstable Air	5-6	T,V	141
Volcano Eruption	K-3	K,T,V	120
Wildlife	4	K,T,V,A	91

SOCIAL STUDIES

	Grade	Modality	Page
Activities That Develop Student Independence	K-6	K,T,V,A	78
Arts in Basic Education [Citizenship]	1-5	K,T,V,A	91
Behavior	K-2	A	195
Can You Label the States/Can You Label the Capitals	5-6	T,V	151
Cattle Drive	4-6	V	186
Chain Gang Water Hauling Activity	4-6	K,T,V,A	90
Constructing A Contour Map	6	K,T,V	115
Dateline USA	4-6	K,T,V,A	83
Evening News	4-6	A	194
From Forest to Cactus	6	T,V	150
History Hang-ups	4-6	K,T,V	116
How Do We Live At School	K-3	T,V,A	169
Indian Cooking	5-6	K,T,V	122
Know the Presidents	5-6	T,V	138
Learning States and Locations	4-6	T,V,A	173
Memorization	4-6	V,A	189
My City	4-6	K,T,V	117
Natural Resources Map	4-6	K,T,V	119
Oklahoma	4-6	K,T,V	138
Pollution Mobiles	4-6	K,T,V,A	75
St. Patrick's Day Scramble	4-6	T,V	136
Time Limits	4-6	V,A	191
What Are the Many Places in My School	K-3	K,T,V,A	86
Which Native Americans Lived in Oklahoma?	4-6	K,T,V,A	88

SPEECH

	Grade	Modality	Page
Activities That Develop Student Independence	K-6	K,T,V,A	78
Creative Drama	5-6	K,T,V	114
Evening News	4-6	A	194
Gingerbread Boy	K-3	K,T,V,A	77
Which Native Americans Lived In Oklahoma?	4-6	K,T,V,A	88

SPELLING

	Grade	Modality	Page
Rainbow Race	4-6	T,V	145
Write-A-Word	1-6	T,V,A	166

Evaluation

Circle the appropriate response to show us what you think:

1. These Learning Styles Resource materials are:

WOW

GOOD

OK

YUK

I get the message YEAH

It rings a bell

I see the picture

2. The activities in this guide are:

Wonderful!

Fun & Useful

Too hard to do

Boring

3. What will you do with this guide?

a. I am using it

b. I have used it

c. I intend to use it

d. I never want to use it